Local and Regional Variation in Landscape Character: The Significance of the Tamar Valley to the Historic Landscape of East Cornwall and West Devon

(Volume 1 of 2)

Submitted by Philip William Treveil to the University of Exeter
as a thesis for the degree of
Doctor of Philosophy in Archaeology
in November 2019

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature……

Abstract

The historic landscape of the South West Peninsula has traditionally been considered in terms of its relationship to more central areas of England, and in the medieval period this has tended to be with reference to the 'Midland System'. Often regarded as being the most developed form of rural organisation in the Middle Ages, the model is of parishes dominated by single, nucleated villages, surrounded by two or three large open fields. In regions beyond this 'Central Zone' the perception is of more dispersed settlement patterns and an absence of extensive open field. More recently, however, there has been an acknowledgement that such a broad-brush approach masks greater variation in landscape character within regions themselves than was previously recognised.

This thesis therefore sets out to examine local and regional variation in the historic landscape of the South West Peninsula, with a particular emphasis on a potential division between Cornwall and Devon. Although on traditional models seen as characterised by a uniformity of dispersed settlement and general absence of open field, it is contended here that there were indeed notable variations in the historic landscape within the region itself, with the Tamar Valley as the dividing line. Comparing the landscapes of Cornwall and Devon was also felt to have a direct bearing on another important debate, that of the so-called distinctiveness of 'Celtic' Cornwall from its 'English' neighbour, Devon. If real, could such supposed differences have had an effect on the form of the historic landscape?

This is approached through two objectives, comprising an assessment of rural settlement nucleation/dispersal on the one hand and distribution of former open field on the other. Analysis is undertaken in GIS, using as its base cartographic sources from the late 19th century, to which additional layers of data are added to aid in interpretation, from archaeological and monument surveys, documentary sources to aerial photography. By assessing such settlement and field system patterns across Cornwall and Devon the aim is to identify variations in the historic landscape of the South West that may reflect different approaches to how the landscape was organised and managed in the past by the different communities.

Table of Contents

List of Figures

List of Tables

Acknowledgements

My thanks go to my supervisor, Stephen Rippon, who suggested the landscapes of Cornwall and Devon as a subject worthy of pursuit, and who has provided much valuable advice and guidance throughout the research underpinning this thesis. Thanks also go to my second supervisor, Oliver Creighton, for his pertinent observations and constructive comments.

The basis of this research has been undertaken using GIS. Initial guidance and setting up was provided by Alex Khan and Mike Mullins, with useful files provided by Chris Smart. More recent assistance with updated versions of the software was provided by David Hein-Grigg, who helped smooth what would otherwise have been a difficult undertaking.

Some time was spent in the Devon Records Office looking a RAF aerial photographs, and my thanks go to the staff there who provided space and offered advice on the techniques of viewing photographs stereoscopically.

Working on a PhD part-time can be a solitary exercise and I therefore cherish the moments when I have been able to share my thoughts and ideas, both with other students and with archaeologists, both amateur and professional. My thanks therefore go to members of the Cornwall Archaeological Society, and in particular Peter Herring, for discussing ideas and the subject of settlement and field systems.

And to my wife, Claire, who has supported me, allowed me the time and space to study and write over a period of many years, and suffered many travels off the beaten track around Cornwall and Devon, to investigate those hidden corners.

1

Introduction

Students of the historic landscape have, for the past century or so, been steered in the direction of seeing England in terms of two major zones or provinces. In *The History of the Countryside*, for example, Oliver Rackham (1986) divided the landscape into 'ancient' and 'planned' countryside. The latter represented areas of nucleated settlement and enclosed former open field, dominating a broad swathe of the country stretching from the North East, down through the Midlands, to central-southern England. To the south-east and west of this band, countryside tended to be more wooded, and settlement more dispersed. More recently, doubts have been cast on the usefulness of such an approach, with greater variation in landscape character recognised from within these broad regions. The processes which lie behind the formation of landscape character are now also seen as being far more complicated than was once assumed to be the case. Local variation within larger regions, in the case of this thesis the South West Peninsula, may be equally as significant as those seen between broader regions.

This thesis is therefore about local and regional variation in the historic landscape of South West England. It looks at whether differences may be discerned between the landscapes of the two counties of Cornwall and Devon, separated by the Tamar Valley and, if so, whether they could in any way be reflective of broader social, political or cultural differences.

The Cornish-English Divide.

When one thinks of the South West Peninsula there has traditionally been a distinction drawn between Cornwall and Devon, with Cornwall in particular being seen as somehow separate, a distinctly 'other' place, with its roots in the Celtic past. Devon, by way of contrast, is usually regarded simply as another English county. In looking at the historic landscape across the region, therefore, the aim of this thesis is to see whether any such differences, real or imagined, may be reflected in the landscapes of the two counties.

The starting point is with a reflection of the long-held belief in Cornish distinctiveness, for it is from the Cornish side of the divide that the assertions of Cornish singularity derive. Devon, by contrast, has not seen fit to disassociate itself from the rest of England. Cornwall once had its own language, a branch of Brittonic Celtic closely akin to Welsh and Breton. The Cornish language also lay behind the Cornish Revival Movement of the late 19th and early 20th centuries, led by such worthies as Henry Jenner and Robert Morton Nance (Beresford-Ellis 1974). From a practical standpoint, Oliver Padel (1985), the leading authority on Cornish place-names, has shown just how marked the border between Cornwall and Devon really is, in terms of the distribution of place-names of Brittonic origin (and see Kain and Ravenhill 1999). Crossing the River Tamar into Cornwall and it immediately becomes apparent that this was a linguistically Celtic area. Richard Carew's comment in the early 17th century that, 'by Tre, Pol and Pen you shall know the Cornishmen' (Halliday 1953, 126), is often quoted, and in much of Cornwall it is the dominance of place-names in *tre-* which is the most striking. But the question which should perhaps be asked is whether these differences represent anything that is other than superficial, and which could relate to the distant past of the early Middle Ages. Is it possible to discern, in the way the landscape was organised and managed in the past, for example, substantially contrasting ways of doing things that might be reflective of different social groups?

In more modern times, historians of the county, most prominently Philip Payton formerly of the Institute of Cornish Studies, have often claimed a distinctly 'Celtic' character for the Cornish, emphasising a certain individualism in their

disposition. For the Middle Ages, Payton (1992, 49-50) describes the Cornish as 'a class of independent and potentially mobile peasant … a precursor of the independently-minded small tenant farmer which came to characterise Cornwall in later centuries, and indeed which is still much in evidence today'. If this was indeed the case – that the Cornish were organised socially in such a different way to their English counterparts – it might be argued that this could be reflected in how the landscape (and in particular the rural landscape) was structured and used in the past. A slightly different approach has been taken by Bernard Deacon (2007), who has interpreted the history of Cornwall in terms of two competing traditions, at times as English county, and at other times as 'Celtic' country. Periods of integration into the English (or British) state have then been followed by episodes of divergence, the dominance of one or other tradition varying over the centuries.

Objectives

There are many facets to the historic landscape and it was recognised from the beginning of this study that it would be impractical to look at all of its component parts. It was therefore proposed to achieve this aim through two principal objectives: a survey of settlement patterns and relative settlement nucleation/dispersal on the one hand (Obective 1), and a reconstruction of the former distribution of open field on the other (Objective 2). As will become clear in Chapter 2, these have been two central, linked themes in medieval landscape studies in England for many years, and also have the advantage that, in particular, nucleated villages and open field represent communal ways of farming the landscape. The inference from the forgoing discussion is that an 'independent minded' people (the Cornish) would not have organised their communities in such a way (in contrast to the Devonians).

Referring to Hatcher's (1970a) study of the Duchy of Cornwall, Payton (2004, 80) states that 'there was no trace of the open-field, strip-system of agriculture (so typical of English manors) on any of the Duchy properties…where the population tended to be scattered in small hamlets rather than grouped in 'nucleated' villages such as those that characterised much of lowland England'.

If this were the case, the pattern should therefore be clear: the historic landscape of Cornwall should be characterised by patterns of dispersed settlement and absence of open field, whilst the opposite should be true of 'English' Devon. Whether or not this was actually the case will be a key theme of this thesis.

Study Area

In order to achieve these objectives, a study area or areas first required defining. As will be described in more detail in Chapter 4, at its broadest scale there is a 'natural' regional study area, comprising Cornwall and Devon in their entirety, along with a part of Somerset, that is, the South West Peninsula to the west of the Quantocks and the Blackdown Hills. Most of the work, however, would be on a more targeted area comprising a limited transect across adjoining parts of the two counties, which is here termed the 'local study area'. The dividing line between the two counties is today formed by the River Tamar. From at least the mid-1st millennium AD the river was also the approximate border between Cornwall and Devon, although detached parts of each county could be found on the 'wrong' side of the river. It was the local government reforms of 1974 which tidied up these historic discrepancies.

It should also be recognised that whilst rivers may function as borders between territories they may, alternatively, unite communities on opposite banks. Therefore, the post-medieval mining industries of the Tamar Valley, and the later market gardening of the 19th century, were both unified by the river, it providing a waterborne routeway to the port of Plymouth and to the wider world. Step back a few centuries, however, and the Tamar was a border of some long standing, as was the River Thames in its lower reaches, and also the Humber Estuary, in the early Middle Ages. In East Anglia, it has been proposed that there was a long-standing boundary approximately on the line of the Lark and Gipping valleys (Martin and Satchell 2008, 214-16). These are examples of what Williamson (2013, 1) has termed 'strangely stable boundaries'. It was therefore recognised from the start that this study would need to take into account the changing role and significance of the river over time.

Identifying variation in settlement and field system patterns is, however, only the first step in searching for explanations for the formation of landscape character. As will become clear, the chosen objectives of studying settlement nucleation and open field have been the subject of a great deal of debate over the past century or so. Varying emphases have been placed by different researchers on the relative importance of environmental factors on the formation of villages and open field on the one hand, as opposed to aspects of human agency, such as the role of those who controlled the land (lordship), on the other. Landscape character is to an extent inevitably influenced by the natural environment. A proponent of this approach is Tom Williamson, who has stated that 'patterns of regional variation were largely a function of environmental factors: of climate, topography, geology and soils' (2013, 234).

Other case studies have led to alternative views, and sometimes landscapes that are otherwise similar in terms of the underlying physical makeup have produced very different patterns in terms of their settlements and fields, which make it much more likely that decisions made by individuals or by communities were more dominant factors (Rippon 2008). It may therefore be a question of degree and the particular circumstances in each case. With one aim of this thesis being to assess whether cultural differences have contributed to the formation of the historic landscape of the South West, detailed consideration of the possible influences of the natural or physical environment would therefore be an essential pre-requisite.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 1.1: Topographical map of England and Wales indicating position of the South West Peninsula (based on freeworldmaps.net)

In deciding on a more focussed study area (or areas), two different approaches could be taken. Several sample areas across the South West (for example clusters of parishes) could be chosen, to give as wide a coverage as possible. Alternatively, a continuous transect across the border between the two counties might be settled upon. For reasons which will be more fully discussed in

Chapter 4 the latter alternative was felt to be more appropriate for a local study area designed to uncover differences between two adjacent counties

This image has been removed by the author
of this thesis
for copyright reasons

Figure 1.2: Map of South West England prior to the Local Government boundary changes of 1974 (The Citizen's Atlas 1952). Historically, an enclave of Devon around North Petherwin and Boyton was located on the west side of the River Tamar.

The local study area would therefore need to be positioned, and of a sufficient size, to take in a range of landscapes to allow for a determination of the possible impact of the environment on any patterns observed in the organisation of the historic landscape. As a study looking at what was largely a rural landscape, it was also felt necessary to avoid coastal districts, where ports, such as Looe, Saltash and Plymouth, grew to greater prominence from the later Middle Ages onwards, exerting an appreciable influence on their hinterlands in the process. It was only natural, therefore, to use the granite uplands of Bodmin Moor and Dartmoor as the western and eastern limits of the local study area, and to encompass the undulating, lowland agricultural landscapes to either side of the Tamar, between. An additional and distinctive area of the South West, the Culm Measures of north-east Cornwall and west Devon, was also brought into the equation, allowing for the assessment of the

influence of another landscape type spanning both counties. The landscapes to either side of the River Tamar in the border region are, therefore, very much mirror images of one another.

The framework of the local study area itself would be based on early territorial units of a sufficient scale to allow detailed analysis of settlement nucleation and distribution of open field. Ecclesiastical parishes were chosen as providing the most useful backdrop, and one which was used in another relatively recent study across another border area of the South West, between Devon and Somerset / Dorset along the line of the Blackdown Hills (Rippon 2012). In the event, seventy-one parishes were chosen, as providing an area of sufficient size to take in the requisite range of landscape types (Figures 1.4 & 4.1). This is described in more detail in Chapter 4.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 1.3: The South West Peninsula showing the counties of Cornwall and Devon, to the west of the red line. The Quantocks and most of Exmoor are located in Somerset and The Blackdown Hills are split between Devon, Somerset and Dorset, although would come under the same region. (HolidaymapQ.com).

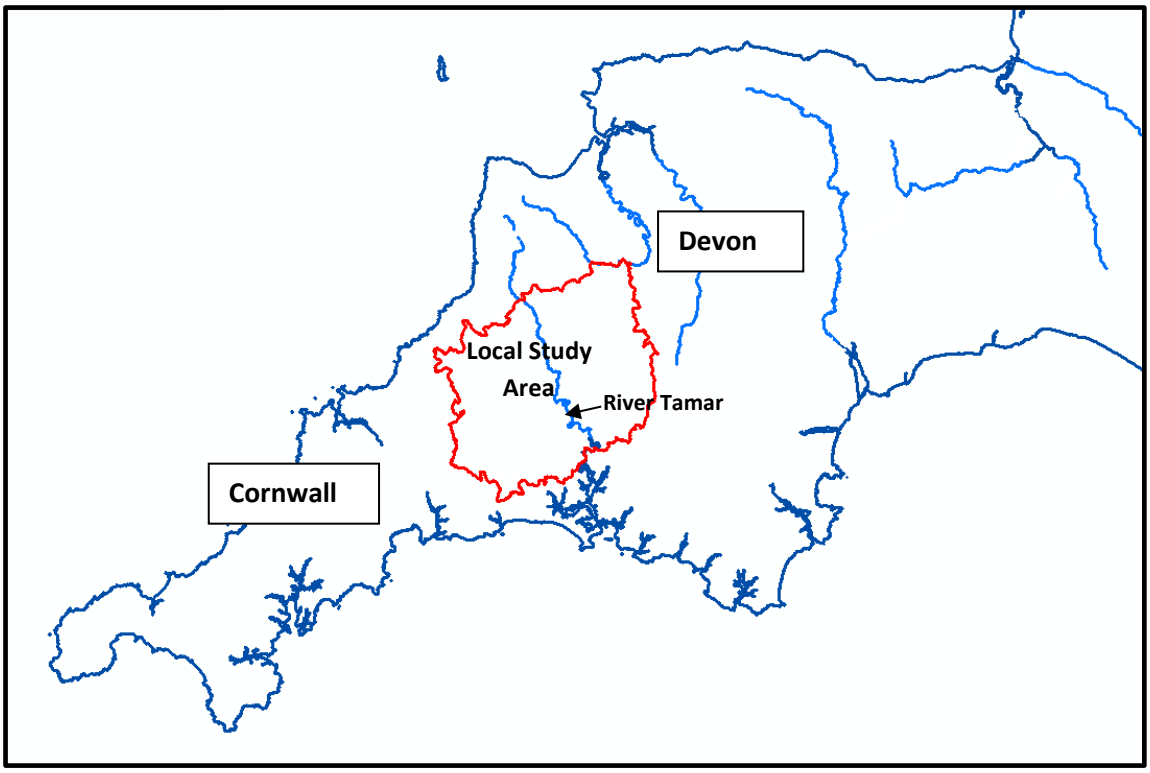


Figure 1.4: The location of the local study area on the border between Cornwall and Devon, straddling the River Tamar.

Organisation of the Thesis

Following the introduction, chapters are arranged in three groups, with chapters 2-4 providing background and methodological information; chapters 5-8 dealing with the two main objectives, that of the analysis of settlement and field system patterns; and chapters 9-11 providing more detailed discussions of the results and a conclusion to the thesis. Chapter 2 provides a summary of medieval landscape studies, including current themes and key debates mainly relevant to settlement nucleation and open fields, and then focusses on particular issues relating to the South West Peninsula. Chapter 3 outlines aspects of the physical landscape and climate of the South West, including geology, topography, soils, rainfall and agricultural potential, before going on to look at how different parts of the region were perceived by travel writers and topographers in the early

post-medieval period. This is with the object of defining a series of *pays*, sub-regions united by various physical characteristics, and which, in addition, were regarded as landscape regions in the early post-medieval period. These also provide a backdrop upon which settlement and possible open fields could be mapped, to allow an assessment of the relative contribution of environmental factors and social agency.

Chapter 4 outlines the sources used and the methodologies employed in this study. The approach was to undertake a map regression employing a Geographic Information System (GIS), starting with the earliest comprehensive map evidence readily available. This involved using the First Edition Six Inch to One Mile Ordnance Survey maps of the 1880s/90s (1:10,560) and also the Twenty-Five Inch to One Mile OS maps (1:2500) of the same period, the former downloaded in digital format into a GIS program known as ArcMap.

The next two chapters deal with settlement nucleation/dispersal across the local study area (Objective 1), starting with the 19th-century evidence in Chapter 5 and then moving on to make inferences about the late medieval / early post-medieval landscape in Chapter 6. This was undertaken using the 19th-century map evidence as a starting point and then bringing to bear on this a range of other types of evidence. These included general historical descriptions and documentary evidence, archaeology and earthwork surveys, as well as evidence derived from aerial photographs and LiDAR, the latter a more recent technique involving aerial laser topographic surveys. These are used to identify the possible size and extent of each settlement in the later Middle Ages. The extent of settlement nucleation / dispersal across the local study area provides noticeable distribution patterns which are then discussed in detail in the later chapters.

The second major piece of work, in Chapter 7, examines evidence for former open field (Objective 2) and plots its putative distribution within the local study area. As noted, open field provides evidence for communal methods of farming and its presence can potentially throw much light on social organisation in the medieval period. The late 19th-century OS maps are again used as the starting

point for this analysis, and a typology of field outline shapes/morphologies thought to be indicative of former open field created. These are then combined into field system categories with the object of mapping the minimum possible extent of former open field in the later medieval and early post-medieval periods. The distributions of each type of field system are then plotted and possible explanations for their origins put forward.

The two tranches of evidence are then brought together in Chapter 8, which examines the interplay between settlement nucleation / dispersal on the one hand and the distribution of open field on the other. Some very distinctive distribution patterns are identified and used to define four historic landscape character areas, each of which exhibits noticeable internal consistencies. These are then compared with the physical *pays* identified in Chapter 3 to then allow for an assessment of the extent to which the former may or may not have been determined by the latter.

There then follow two discussion chapters which offer possible explanations for the settlement and field system patterns observed in Chapters 5-8. Chapter 9 looks at some of the more traditional themes, including environmental determinism, the role of lordship and processes of emulation, whereby communities adopted the methods and practices of neighbouring communities, drawing on a range of previous historical studies. These include an economic study of Tavistock Abbey (Finberg 1951; 1969a) and another of the lands of the Duchy of Cornwall (Hatcher 1970a). The final section of the chapter examines one particular aspect of the landscape which does have a cultural association, that of place-names, testing the distribution of Brittonic Celtic place-names across Cornwall with the settlement and field system patterns identified in the study.

Chapter 10 widens the discussion by introducing the concept of time-depth in order to explain some of the settlement and field system patterns which have been identified. The chapter starts by looking at the evidence for settlement contraction and dispersal in the South West from the late medieval period onwards, identifying the evidence for this process from within the local study

area. Linked to this are processes of enclosure of former open field, and evidence for this is provided from documentary sources, records relating to the tithe apportionments of the 1840s, evidence for loss of field boundaries and evidence for population changes between Domesday and the later Middle Ages. Suggestions are also made as to possible economic changes at work in the South West in the later Middle Ages which may have determined these patterns. A summary of the thesis is then provided in the concluding chapter, Chapter 11, and an assessment made as to how far the aims and objectives of this thesis have been met.

2

Landscape, Settlement and Fields: Review of the Evidence

Introduction

This thesis is about local and regional variation in the historic landscape of the South West and covers the medieval and early post-medieval periods. Whilst dealing generally with landscape character, this study will concentrate on two particular aspects, settlement nucleation and open field farming, both themes being key to medieval landscape studies. The first part of this chapter begins by briefly tracing the development of ideas in medieval landscape studies as a discipline in the 20th and 21st centuries, before concentrating on the origins and development of villages and of open field farming. This has tended to be dominated by the competing themes of environmental determinism on the one hand and the role of human agency on the other.

The second half of the chapter then focusses on the subject area of this thesis, the rural landscape of south-west England. By the 19th century characterised by a pattern of dispersed settlement of isolated farms and small hamlets, small enclosed fields and a dense network of lanes, the genesis of this landscape are now thought to lie firmly within the medieval period (Hoskins 1952; 1955; Finberg 1949; 1952; Preston-Jones and Rose 1986; Herring 2006a; Herring *et al* 2011a). Following a brief summary of general archaeological overviews of the South West, this section reviews theories on the formation of the early post-Roman countryside, including settlement distribution and field systems. With the most conspicuous archaeological remains surviving on the uplands of Bodmin Moor and Dartmoor, survey and excavation undertaken in these highland areas

are summarised, along with the longstanding practice of transhumance – the seasonal movement of livestock between lowland farmland and upland, summer pasture. It then moves on to describe approaches which have been taken in studying the permanently settled lowlands of Cornwall and Devon, that in Cornwall have been termed 'anciently enclosed land' (Herring 1998; 2006a, 44-5; 2008).

Medieval Landscape Studies

Although as a discipline, landscape archaeology in England has largely been developed since the Second World War, its origins, at least as far as the post-Roman period are concerned, can be traced back to the turn of the 20th century, with the works of Seebohm (1890), Vinogradoff (1892), Maitland (18970 and Gray (1915). Regional variation in landscape character was also a theme developed in the inter-War years by Cyril Fox, in *The Personality of Britain* (1932), in which the distinction between upland and lowland zones was first made. Perhaps the most influential work in the post-War period, however, and the one most remembered today, was W. G. Hoskins' (1955) *The Making of the English Landscape*, which was instrumental in bringing the subject to the attention of a wider audience.

During the same period, other leading lights included John Hurst, Maurice Beresford and Herbert Finberg, with Finberg's (1951; 1969a) study of the land and estates of Tavistock Abbey, Devon, being an early attempt at reconstructing a medieval landscape. Beresford began his excavations at the deserted medieval village of Wharram Percy in Yorkshire, which were to continue for several decades (Beresford 1957; Beresford and Hurst 1990) and, with the setting up of the Deserted Medieval Village Research Group (DMVRG) by Hurst and Beresford in 1952, this heralded a growing interest in individual medieval settlements, culminating in the publication of *Deserted Medieval Villages*, which they co-edited (Beresford and Hurst 1971). The approach at that time, however, was very much taken from an historical perspective, with a particular emphasis on trying to understand the effects of the Black Death on rural settlement (Beresford and Hurst 1990, 27-28).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.1: Historic landscape character as mapped in four major studies and reproduced in Rippon (2008, fig 1.2). (A) Using enclosure of common fields by Act of Parliament in the 18th and 19th centuries (Gonner 1912); (B) Regularly arranged two and three field systems (Gray 1915); (C) 'ancient and 'planned' countryside, after Rackham (1986, fig 1.3) (D) 'Provinces' of Roberts and Wrathmell (2002, fig 1.1).

Understanding of the medieval landscape was also helped by the increasing level of fieldwork being undertaken from the 1960s onwards. Work on earthworks was undertaken by Bowen (1970), identifying medieval as well as 'Celtic fields', and programmes of field survey were carried forward by the Royal Commission on Historic Monuments of England (RCHME), notably that undertaken in Whitechurch parish, Wiltshire (Taylor 1967). This work was enhanced by the increasing use of aerial photography in identifying earthworks and cropmarks, initially in the inter-War years but with increasing effectiveness during and after the Second World War, pioneered by O. G. S. Crawford and Kenneth St Joseph (Crawford and Keiller 1928; Beresford & St Joseph 1958). In terms of medieval studies, this proved to be immensely important in identifying the earthworks of deserted medieval settlements, and also the distinctive ridge-and-furrow indicative of medieval cultivation.

The early 1970s saw a number of important reviews of the state of landscape archaeology, including *Archaeology in the Landscape* (Fowler 1972) and *Recent Work in Rural Archaeology* (Fowler 1975). Aston and Rowley's (1974) *Landscape Archaeology: An Introduction to Fieldwork Techniques on Post-Roman Landscapes*, and Taylor's (1974) *Fieldwork in Medieval Archaeology* both used maps and plans of modern landscapes, combined with aerial photography and earthwork surveys, to interpret the landscape in its totality, whilst a number of local and regional studies appeared in *Studies in British Field Systems* (Baker and Butlin 1973).

Since the 1990s there has been a growing appreciation of the extent of regional variation in landscape character, with a number of surveys aimed at the broader landscape. Examples include the Whittlewood project, undertaken on the borders of Buckinghamshire and Northamptonshire (Jones and Page 2004; 2006; Page and Jones 2007), and the survey of Rockingham forest, in the northern part of Northamptonshire (Foard 2001; Foard *et al* 2005). Widening the area of study, Lewis, Mitchell-Fox and Dyer's (1997) *Village, Hamlet and Field*, which encompassed the east Midland counties of Leicestershire, Bedfordshire, Buckinghamshire and Northamptonshire, integrating the results of fieldwalking

and survey, with cartographic and documentary evidence, and Brown and Foard's (1998) study of Northamptonshire.

Whilst studies of individual counties, or groups of contiguous counties, may over emphasise the significance of political boundaries, those based on distinct landscape regions, once known by the term *countrie* but now more commonly referred to by the French name *pays*, have taken on increasing importance in recent years, with the approach pioneered by Leicester University (Rippon 2009, 230; 2012, 2). Noted surveys include the Fenland survey (Silvester 1988; Hall 1996), and the Gwent Levels Historic Landscape Study (Rippon 1996), the latter effectively being an early pilot for historic landscape characterisation. English Heritage was a particular driving force in shifting the focus towards looking at distinctive landscape districts, and leading on from this there followed studies of many areas, including Exmoor (Riley & Wilson-North 2001), the Malvern Hills (Bowden 2005), and the Quantock Hills (Riley 2006), although these were of national parks or areas of outstanding natural beauty. Academic studies along similar lines included those for Swaledale (Fleming 1998) and the North Somerset Levels (Rippon 2006).

In *Beyond the Medieval Village*, Stephen Rippon (2008) brought together the results of several regional studies on the edges of the Central Zone, including Somerset and East Anglia, as well as south-east and south-west Wales, in order to better understand local and regional variation in landscape character. More recently, in *Making Sense of an Historic Landscape* (2012) he has looked at a study area straddling east Devon and west Somerset/west Dorset, centred on the Blackdown Hills. Both works promote a multidisciplinary approach to landscape studies and the use of multiple 'layers' of data, using historic maps and documents, the findings of archaeological excavations and survey and also, where possible, vernacular architecture.

Tom Williamson has contributed significantly to the debate examining, in particular, the historic landscape of East Anglia and the East Midlands, and emphasising the importance of climate, topography, geology and soils in shaping the diverse landscapes of medieval England (Williamson 2003; 2013,

234; Williamson *et al* 2013). One aspect of Williamson's approach is to not stick too rigidly to traditional models to account for the distribution of landscape regions, such as the 'woodland' and 'champion' divide. Looking at environmental factors, he has argued that settlement patterns and field systems resulted from the 'responses made by farming communities to the challenges posed by soil, climate and topography' (Williamson 2003, 21).

Nucleated Settlement and Open Field

Introduction

For more than a century the study of the English medieval rural landscape has been marked by an emphasis on two outwardly linked processes, the formation of nucleated villages and, closely associated with their emergence, the development of large open fields. In what has become known as the Midland system, characteristic of central England, implicit in this scenario is the assumption that on the one hand villages embody the natural form of English rural settlement and on the other that open fields constitute the most developed form of agricultural practice in the medieval period (Bishop 1935; Orwin and Orwin 1938; Homans 1941).

Open Fields

Open field is a catch-all term for an arrangement in which tenants of a settlement held strips of land in its arable fields which were not demarcated by 'clearly visible boundaries' (Renes 2018, 123). Open fields may have been divided into either 'regular' or 'irregular' forms, with the former category more strictly organised. Given the fragmentary arrangement of holdings, the processes of farming, such as ploughing, cropping and pasturing of livestock, would be a communal affair, regulated by the village community or by a manorial court, with tenants having communal rights (Renes 2018, 123). The most easily recognisable form of regular open field is known as 'common field' (Thirsk 1964, 3), in which the holdings of individual tenants/occupiers of a township, often termed a 'yardland', comprised a number of narrow strips (*selions* or 'lands') scattered throughout the different fields to allow equitable distribution of the best and worst land, two or three arable fields being the classic pattern seen in the Midlands of England. A system of crop rotation would

then be followed, in which at least one field would be left fallow each year. Both the arable fields and meadow would be opened up for common pasturing when fallow or after harvesting.

Strips would usually be half an acre or less (typically related to the extent of land which could be ploughed by a team in a day) and grouped in a regular fashion in furlongs (*quarantena*) with common headlands (*forera*), the ends of the strips where the plough was able to execute a turn to run down the next furrow (Dyer 2018,31). Demesne land (belonging to the manor) could be either mixed in with the strips of tenants or in a separate block (Dyer 2018, 31). In the Midlands, fields were often ploughed to produce raised ridges, perhaps to help with drainage, leaving a pattern known as ridge-and-furrow (Williamson 2018, 5). These have often been preserved in the modern landscape, particularly in the Midlands, where fields have subsequently been turned over to pasture. Although strictly speaking a fiscal measure, a yardland is often equated with 30 acres of arable (Harvey 1993), to which a share of a community's woodland and use of pasture might also be added (Dyer 2018, 33).

In central England two- and three-field systems commonly operated. A range of different crops might be marked out in a two-field system, whilst it was typical in a three-field system to have one field with a winter-sown crop, one field with a spring-sown crop, and the third left fallow (Dyer 2018, 33). Even within the Midlands there could be much variation, with areas of light soils often exhibiting a pattern referred to as 'sheep-corn' husbandry, in which sheep would be pastured on heath and downland during the day, and brought down to the fallow at night where they would be pastured, or close-folded, often enclosed by moveable wattle hurdles. Light soils lose their nutrients easily and the practice was a means of replenishing the soil through manuring (Kerridge 1992; Dyer 2018, 5-6). Rather than an even distribution of strips through an open field, holdings might have a greater concentration in certain parts of a field, forming an 'irregular' or 'patchwork' field pattern (Postgate 1973; Roberts 1973; Hunter 2003). Sometimes areas of the country with fewer open fields might also have enclosed fields held in severalty, this mixing of field types sometimes being referred to as 'intermediate' fields (Williamson 2018, 6).

In terms of fully formed, regular open fields the earliest documentary records in England only date back as far as the 13th and 14th centuries (Williamson 2018, 8). There are intimations of some form of open field arrangements being present much earlier, and reference is often made to a law of King Ine of Wessex, dating from the 7th century, in which there is an apparent reference to intermingled strips (Whitelock 1958, 368). Their employment is also implied by boundary clauses in 10th and early 11th-century charters (Hooke 1998, 21; Rackham 1986, 172-5).

Early Theories

Perhaps the origins of this focus on the Midland system of two- and three-field open fields can be traced back to John Leland in the mid-16th century, who in his extensive travels through England described what he termed 'champion' countryside, a landscape characterised by villages and open fields. The implication at the time was of a superior form of agricultural organisation. Based on Leland's descriptions, in the early 20th century Slater (1907) plotted those areas visited by Leland, his maps showing a broad swathe of 'champion' countryside extending from the north-east of England, down through the Midlands and into central-southern England. Although much has changed since the 16th century due to later developments in the countryside, in particular by parliamentary enclosure, it is clear that by the High Middle Ages the central part of England did have a distinctive type of landscape, composed in the main of nucleated villages and large common fields, often covering whole parishes and under some form of communal management (Rippon 2007).

Two early explanations for the development of villages and open fields were put forward by Frederick Seebohm (1890) and Paul Vinogradoff (1892) in the closing years of the 19th century. Seebohm (1890, 120-2), saw the creation of open fields in terms of co-aration, the need for communal involvement in farming, with a high level of investment needed to put together the 'typical' medieval eight-ox plough team and plough requiring a pooling of resources by villagers. Seebohm (1890, 409-11), also believed the practice to have had its origins as far back as Roman times, whilst Vinogradoff (1892, 162, 236; 1905,

150) saw open fields and nucleated villages as introduced by Anglo-Saxon migrants in the 5th and 6th centuries, employing a primitive shareholding system.

The first systematic attempt at mapping the extent of nucleated settlement and open field agriculture, however, was undertaken by Gonner (1912) in the early 20th century, tracing the enclosure of common fields by Act of Parliament in the 18th and 19th centuries (Figure 2.1A). Howard Gray's (1915) subsequent more detailed study, mapping the extent of two and three field systems, however, was to determine the debate for the next half century or so. Gray proposed the use of the term 'Midland System' for his 'Central Zone' of England where such open fields seemed to prevail, to describe this general arrangement (Figure 2.1B), as it was most characteristic of central England. Whilst in broad terms Gray's Central Zone was similar to that mapped by Gonner, he also went on to identify six distinct regional field types with, for example, less well organised open fields in East Anglia and Kent, with smaller settlements associated with a patchwork of many smaller, irregular open fields. It was suggested that in Kent, the field systems had possibly been adopted wholesale from the preceding Romano-British estates and subdivided through time through partible inheritance (Gray 1915, 415-6).

The identification of a broad central area of England distinguished by villages and open fields has been echoed by more recent studies, such as Oliver Rackham's (1986) partition of rural England into 'ancient' and 'planned' countryside (see below). Brian Roberts and Stuart Wrathmell's (2000; 2002) survey of settlement nucleation and dispersal, based on 19th-century mapping also resulted in a division of England into three provinces, their Central Province equating approximately with Gray's Central Zone (Figure 2.1D). This tripartite division of the English landscape remains the cornerstone of English medieval landscape research, though deeply rooted in the earlier studies was the premise that nucleated villages and open fields represented the most developed form of agricultural practice, that areas to the north, west and south-east were peripheral to this development and, by implication, somehow less progressive

As with Vinogradoff, Gray (1915, 415-6) also saw the origins of the Midland system in terms of ethnicity, with the practice being imported by immigrants from northern Germany and southern Scandinavia. Settlement patterns in the north and west, he saw as distinguished by small hamlets of perhaps six farms or less, with small cultivated 'infields', larger 'outfields', used for occasional cultivation, and grazing land, an arrangement which he regarded as a distinctively Celtic system. In the 1930s, Cyril Fox (1932) also considered villages and common fields as having been created by incoming Anglo-Saxon settlers, clearing woodland and waste in the 5th and 6th centuries, a proposition shared by other researchers in the first half of the 20th century (Bishop 1935; Orwin & Orwin 1938; Homans 1941).

Between the wars, T. A. M. Bishop (1935) working in Yorkshire proposed that intermingled irregular strips of agricultural land could have resulted from the process of assarting, the clearing of woodland or 'waste' ground, which would then be shared amongst participants in the clearance. The American sociologist G. C. Homans (1941, 90-1) interpreted open field as allowing an 'equality of opportunity' in which distribution of strips across fields allowed villagers to share land equally, to take account of different types of soil and the drainage properties of the land, Homans possibly being one of the first writers to emphasis the planned nature of the Midland system. Homans (1969) also saw open fields in terms of racial origins, or at least tribal customs, linking developments in East Anglia with Frisia in the northern Netherlands.

In his classic book, *The History of the Countryside*, Oliver Rackham (1986) divided the post-medieval English countryside into three broad landscape zones, with a central belt of 'planned' countryside stretching from north-east England, down through the east Midlands and East Anglia, to central Dorset, with 'ancient' countryside to either side, to the west and to the south-east (Figure 2.1C). Planned countryside was characterised by nucleated villages, occasional scattered farms and large rectilinear fields, often divided with fairly insubstantial field boundaries, whilst ancient landscape involved more scattered settlement and less irregular field patterns. Rackham defined planned countryside as having been formed largely in the 18th and 19th centuries through

parliamentary enclosure, replacing the large open fields that had once dominated the rural landscape in these areas (the 'Champion' landscape of Leland).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.2: The spread of villages and open fields across England (Roberts and Wrathmell 2002, fig. 5.11.) in conjunction with extent of pre-Conquest woodland (Roberts and Wrathmell 2002, fig. 1.10.).

Recent Themes and Focus

Explaining the development of nucleated villages and open fields

The appearance of nucleated villages and the creation of open fields have traditionally been closely linked by researchers in the field of landscape studies, as together they seem to represent a planned, perhaps co-ordinated, reorganisation of the landscape at some point in the first millennium AD (for example, Hall 1981). Taylor (1983) saw the appearance of villages in the Central Zone of England as an aberration, observing that dispersed settlement patterns had been dominant throughout England in the prehistoric and Roman periods and in most other areas outside of the Central Zone in the medieval period, and there has understandably been some debate over their emergence at this point in time.

An important contribution to the debate in the 1960s was Joan Thirsk's (1964) article 'The common fields', which emphasised the role that population growth from the late Saxon period onwards played in driving the reorganisation of the English countryside. This was seen as leading to the subdivision of landholding and the expansion of small subdivided fields, due to a mixture of partible inheritance and the need for the fair division of land, the fragmentation of landholding and the assarting of woodland areas. In this, Thirsk also argued that the various field systems shown in medieval documents were not necessarily of long standing, but that they represented various stages in a common process which had led to the Midland system being the most developed. Thirsk argued that the need to increase the extent of land under arable crops would have necessitated the conversion of pasture to arable, whilst use of a system of crop rotation, with some fields left fallow each year, would allow for both a recovery in soil quality and for their use of the fields in grazing. Such a practice would also facilitate communal access to other resources, such as water and also stubble for grazing (Thirsk 1964, 14). Development was seen as having taken place over a period of time, reaching its most developed form in the 12th and early 13th centuries. Although by the 13th century primogeniture seems to have been the principal method of passing on property, Thirsk argued that this was a later development. With the publication of Baker and Butlin's *Studies of Field Systems in the British Isles* in 1974 these

arguments were accepted wholesale, although Williamson (2018, 11) has suggested that rising population could just as easily have led to many more dispersed farms, rather than to larger villages. Harold Fox (1984, 121-32) accepted Thirsk's arguments on population pressure and noted that open fields were invariably found in areas where pasture was in short supply. This theme was latterly taken up by Lewis, Mitchell-Fox and Dyer (1997), who regarded population increase as one of a set of economic conditions which led to the need for the adoption of an organised system of agriculture to increase food production. Agreeing with Thirsk, they regarded the subdivision and intermixing of landholdings as a result of inheritance practices as a major impetus in the formation of an organised system of agriculture to increase production, leading to a 'village moment' (Lewis *et al* 1997, 191-2). They also posited that areas with nucleated settlement generally had higher proportions of arable land in 1086, although it has been suggested elsewhere that there does not appear to be a correlation between density of population, as extrapolated from Domesday Book, and those parts of England in which villages and open fields were most in evidence (Williamson 2003; Rippon 2008).

There has also been some discussion on the mechanisms by which these processes came about. Thirsk (1966) proposed that a degree of co-operation between Lords and their peasants would have been necessary to undertake agrarian reforms, whilst Campbell (1981) has argued that such a fundamental change could only have come about through the centralised control of local lords, with strong lordship claimed to be a particular characteristic of the Central Zone. The control of townships by lords has also been seen as a factor in the 'organised' layout of many nucleated villages, with holdings of a standard size typically laid out at right-angles to a settlement's principal street, based on research in Northamptonshire (Brown and Foard 1998, 75-7, 91-2). A proliferation of manors as a result of the subdivision of townships was seen by Dodgshon (1980) as more important than a simple increase in the authority of local lords, whilst Dyer (1985) has cited documents showing that some landlords were too remote from their estates to have had a direct influence on their reorganisation. Dyer (2003) connected the process with the formation of the kingdom of England from the 9th century onwards, with the needs of the

centralised state entailing increased revenue from taxation and a requirement for military service. At the same time there was a growth in urban centres, which provided a market for any agricultural surpluses. Such differences in emphasis, however, may simply reflect varying circumstances. In Somerset, Rippon (2006; 2008) has noted that on the estates of the Bishops of Wells there was much variation in the organisation of settlements and field systems, perhaps pointing to a reluctance on the part of landlords to intervene in the affairs of local communities and greater control by sub-tenants and villagers in terms of agricultural organisation. By way of contrast, the estates of Glastonbury Abbey were typically characterised by nucleated villages and open fields, even when sited in areas otherwise dominated by dispersed settlement.

Looking at the subject from a more prosaic standpoint, the Orwins saw the creation of common fields in terms of agricultural practice, with the use of heavy mould board ploughs on difficult clay soils requiring large teams of oxen, and therefore a high degree of community investment and co-operation (Orwin and Orwin 1938, 39). The suggestion was therefore that such improved technology was particularly relevant to the Midlands, although this was rejected by some as variants of open field farming were practised in all partes of England (Homans 1941, 81; Dodgshon 1980, 31-3). Williamson (2013, 196-201; 2018, 19) has seen a possible connection, however, with the clays and mudstones of parts of central England (pelostagnogleys or non-calcareous pelosols). Such soils are particularly susceptible to waterlogging, restricting the period of time during the year that ploughing was practicable. Greater cooperation would therefore be required at times of ploughing or harvesting. These areas also tended to be where there was more meadow, with hay requiring greater levels of labour input over a short period of time, for cutting and drying (Campbell 2000, 75-6).

Indeed, the association of settlement patterns and open field with soil type has been a recurring theme. Brown and Foard (1998) observed that there was intensive, dispersed early Saxon settlement in England on permeable geology, although there would appear to have been a loss of settlement on marginal claylands and watersheds when compared with the preceding Romano-British period. Similarly, Draper (2006) contrasted very different patterns of settlement

and agriculture between the chalk downland and clay vales of Wiltshire. In *Shaping Medieval Landscapes*, Tom Williamson (2003) argued that the physical form of terrain affected the extent of meadow, and that the characteristics of soils determined what could be ploughed and at what time of year. Looking at medieval East Anglia and the East Midlands, Williamson (2003, 23) rejected the pre-eminence of lordship and population density, emphasising the view that agricultural practice was in large part determined by properties of the natural environment, particularly soils, with agricultural practices determined by local communities in response to this.

Whilst acknowledging the importance of soil type in determining agricultural practices, Rippon (2012, 353) regarded this as only a contributory factor. In the reclaimed wetlands of the Gwent Levels, in south-east Wales, Anglo-Norman settlers introduced planned settlement and open fields in the areas directly under their control, in contrast to the dispersed settlement patterns and field closes of the indigenous Welsh in adjacent territories. Williamson (2003) also noted that landscapes which are similar in geology and soil type can produce very different rural landscapes, with the heavy clay soils of parts of Norfolk, Suffolk, Essex and Hertfordshire associated with some form of dispersed settlement patterns and landscapes of irregular open fields. On very similar soils in the Midlands, however, separated by the Chilterns, there was classic champion countryside.

The drive to increasing agricultural efficiency which may have stimulated the creation of nucleated settlement and communal methods of farming, has also been seen in the light of the long-term trend for ever smaller landholdings. This sees the subdivision of postulated early tribal or folk territories in the 5th-7th centuries, perhaps related to late Roman administrative districts known as *pagi* (Bassett 1989; Hooke 1998; Jones 1976, 1981; Fox 1984, 121-32), leading to the ‘great estates’ of the 7th century, each centred on a royal centre, or vill, and ultimately to the more recognisable manors and parishes of the later medieval period (Dyer 2003). It is suggested that the great estates would have been centred on fertile agricultural areas, such as river valleys, with resources in outlying areas bounded by natural features such as watersheds (Hoskins 1952;

Jones 1979, 1985; Williamson 1993; Lewis *et al* 1997; Blair 1991; Fleming 1998). It has been proposed that the fragmentation of the great estates started in the late 7th century, with land granted to the church and to noble families resulting in a large number of manors. Whilst this may have been the case, it has been pointed out that this does not actually explain the physical restructuring of the landscape into villages and open fields, or why this happened in some areas and not in others (Rippon 2008, 14-15).

Dating the formation of villages and open fields

Whilst earlier researchers, such as Gray (1915) associated the advent of nucleated settlement with the earliest Anglo-Saxon settlers, the substantial increase in archaeological fieldwork undertaken from the 1960s onwards began to show that settlement associated with early Saxon pottery was dispersed across the landscape, suggesting that settlement nucleation had therefore occurred later. Thirsk (1966), argued that villages and open fields were formed in the 12th and 13th centuries, whilst Lewis, Mitchell-Fox and Dyer (1997, 191-2) saw dispersed settlement associated with Early and Middle Saxon pottery being abandoned at some point after 850, with a re-arrangement of the countryside into nucleated villages and common fields in the 10th century, a process continuing into the 11th century.

This chronology has been challenged by some. Based on their extensive field surveys of Northamptonshire in the 1970s and 1980s, Glenn Foard and David Hall identified numerous small Early Saxon sites, which were subsequently abandoned between the 7th and 9th centuries, to be replaced by fewer, larger villages associated with the introduction of Late Saxon pottery (Brown and Foard 1998, 73-82). This was thought to have been associated with a 'Great Re-planning', which included the laying out of extensive open field (Hall 1981, 36-7; 1995, 129-39). Williamson (2003) also regarded settlement nucleation as a more drawn out process, starting before the mid-9th century, followed by a phase of re-planning and creation of common fields around the 10th century. The suggested process by which scattered farms gradually coalesced into fewer, nucleated villages has also been questioned, with a relative lack of evidence for the large number of abandoned sites that this would imply (Williamson *et al* 2013; Williamson 2018, 12). Early Saxon sites would actually

seem to have moved around the landscape (Brown and Foard 2004; Hamerow 1991; Taylor 1983), and Williams has described the process as being more of a stabilisation, during the 7th and 8th centuries, with growth around certain settlement nuclei, or the formation of 'polyfocal' villages by the joining together of farmsteads in close proximity to one another (Williamson 2013, 82-4). Survey and excavation in Northamptonshire, Lincolnshire and Norfolk has also provided evidence that settlements began to nucleate before the mid-9th century (Hayes and Lane 1992; Lane and Hayes 1993; Steedman 1994; Rippon 2009).

The debate has further been advanced by more recent programmes of investigation examining still occupied villages, with the Middle Saxon period emerging as the foundation date for many villages (Taylor *et al* 1994; Cessford, 2004; 2005). There is also the ongoing programme of test pit surveys being undertaken in and around villages in East Anglia and the East Midlands for the CORS programme (Currently Occupied Rural Settlements).

The limited reach of the Midland system

It has been proposed that the spread of villages and open fields from core areas in the East Midlands took place through a process of emulation (Taylor 2002, 54; Jones 2011), with village communities simply adopting the practices of their neighbours as the apparent advantages of re-organisation became clear. Under this process, change would therefore have been gradual, with a 'moving frontier' (Rippon 2008; 17), and it should theoretically be possible to chart this expansion over time with increasing distance from the centre (Lewis *et al* 1997; Taylor 2002, 54). This would be illogical, however, if the villages themselves had only grown gradually (Williamson 2018, 16). The transmission of new ideas may have come about through more than one mechanism, however, for example spread as a result of greater contact between European social elites (Rippon 2012).

An economic explanation could be related to increasing urbanisation with the growth of towns providing an incentive for cereal specialisation (Renes 2010). Williamson (2018, 16) has, however, observed that nucleated villages and open field are not necessarily found in the areas of greatest arable production. In the 11th century, for example, one would expect those areas which were later

termed ‘champion’ to be the principal arable regions of England, although an examination of plough-teams and population levels recorded in Domesday do not bear this out (Darby 1977). The supposed connection with population levels also breaks down when consideration is made of the diversity of settlement and field system patterns, both within ‘champion’ areas and elsewhere. In the East Anglian brecklands, for example, there were nucleated villages and open fields, although with also extensive tracts of heathland between settlements, overall population levels were relatively low (Williamson 2018, 16).

Whilst these processes may describe what took place, they do not explain why villages and open fields did not spread wholesale to other regions, such as the south-west and south-east of England (Rippon 2008, 22-3). These areas have often been regarded as more remote and peripheral to the Central Zone and, by implication, less developed agriculturally, with more woodland and waste ground and lower densities of population, and were consequently seen as less likely to be influenced by the agricultural changes observed elsewhere (Lewis *et al* 1997; Roberts and Wrathmell 2002; Taylor 2002). Hooke (1985), for example, thought that in areas dominated by pastoralism and woodland there was little incentive for the type of full-scale re-organisation of the countryside that was seen in the Central Zone.

More recently, thinking has shifted in favour of explaining regional diversity in terms of long-term regional trends in agricultural practice, perhaps stretching as far back as the pre-Roman Iron Age, the idea of the ‘antecedent landscape’, or simply from a strong sense of regional identity, with communities resisting new ways of doing things (Page and Jones 2007; Rippon 2008, 17-20). In East Anglia, as already noted, there appears to have been a long-standing boundary approximately on the line of the Lark and Gipping valleys (Martin and Satchell 2008, 214-16). In the Late Iron Age this may have been the divide between the tribal groupings of the Iceni to the north and the Trinovantes to the south; and in the early medieval period between the East Angles and East Saxons (Brown *et al* 2002; Williamson 2005; 2006a, 28; Rippon 2007; 2018; Martin 2007), with open field agriculture and some form of nucleated settlement to the north and largely dispersed settlement and enclosed fields to the south. In south-west

England, the Blackdown and Quantock Hills have for centuries marked another fundamental division between communities with, in the late Iron Age and Romano-British periods, small defended settlements, rounds and cliff castles to the west, coincident with the territory of the Dumnonii; and to the east large defended hillforts and villa estates, in the later *civitas* of the Durotriges. The line of hills also marks the approximate south-western limit of the Central Zone in the medieval period (Rippon 2012).

European field systems

Open field farming in England should not be seen in isolation from continental Europe, where a wide range of field systems have also been identified. Regular open field systems were found throughout Europe, with a three-field rotation system common during the high Middle Ages throughout much of north-west Germany, the southern Netherlands and central Europe (Renes 2018, 125). Two- and three-field rotations have been identified in Danish Scania and on the central Swedish plain, dating from the 13th century (Gadd 2018, 50) and are believed to have spread from Sweden into south-west Finland (Talvitie 2018, 109).

What Renes (2018, 140) has termed 'mixed farming landscapes', broadly comparable with Rackham's 'ancient countryside', can be found across many areas of the continent. This includes the bocage country of Britanny, with small open fields as well as areas of enclosed fields, and similar systems from north-west Germany through western Denmark and west inland Flanders (Astill and Davis 1997; Renes 2018, 140; Thoen 2018, 170-1).

Enclosure

There are few examples of open field systems remaining in England, as nearly all were subject to enclosure at some point or other. Enclosure (or 'inclosure' in many older documents) involved the consolidation of small landholdings into larger farms, with common rights of land extinguished at the same time. To many, the most recognisable form is that of the parliamentary enclosures of the 17th and 18th centuries, with enclosures facilitated by individual Acts of Parliament, with the first main phase during the 1760s and 1770s, with a second main phase from the mid-1790s through to the end of the Napoleonic

Wars in 1815 (Gonner 1912; Yelling 1977, 11-16). Enclosing open field came to be regarded as a more efficient, productive way of farming. Slater (1907, 85) saw three separate processes at work, comprising the putting together of scattered properties, the abolition of common rights, and the actual physical enclosing of fields with hedges, though timing and sequence may not always have followed this order.

Enclosure had been taking place in some form or other from at least the late 13th century, well before the more formal, arranged enclosures of the 18th and 19th centuries. These could be in the form of General Enclosure by Agreement, with all proprietors with common-field rights agreeing to enclosure taking place as a single process. General Enclosure by Agreement continued during the main period of parliamentary enclosure, particularly with smaller townships, and was recommended by William Marshall, mainly on the grounds of cost (Yelling 1977, 17). Alternatively, enclosure might have been achieved piecemeal, possibly over a period of time. This could take a variety of forms, might involve only some proprietors, could be disorderly, and could well be incomplete for a period of time (Yelling 1977, 7-8, 125). Consolidation of some holdings might be possible but would not easily be able to extinguish common rights (Yelling 1977, 84). Referring to Yorkshire's Vale of Pickering, Marshall (1788, 8) noted that 'the inclosures are badly proportional many of them resembling lanes rather than fields.' Yelling (1977, 27) also noted that piecemeal enclosure was important in south-west England between the 16th and 18th centuries.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.3: Tavistock parish, Finberg's interpretation of the landscape based on early documents and using 18th-century map sources. Tavistock is located at the centre of the map, surrounded by cultivated land, with woodland and moorland at the margins. (From Finberg, 1969a, facing page 41)

South West Peninsula

There are a number of studies which have dealt with the landscape of the South West. Good summaries at the regional scale include Shorter *et al* (1969), Aston and Lewis (1994) on the medieval landscape of Wessex; Kain and Ravenhill's (1999) *Historical Atlas of South West England;* and Pearce's *South-Western Britain in the Early Middle Ages* (2004). The *South West Archaeological Research Framework* (2007) provides a comprehensive summary of all aspects

archaeological, from Cornwall, in the west, to Gloucestershire and Somerset, in the east.

In terms of Cornwall and Devon specifically, there have also been a range of studies at the level of the individual county, with a limited number that have dealt with both. In Cornwall, important summaries were published on the 25th-anniversary of the founding of the Cornwall Archaeological Society (Preston-Jones and Rose 1986), followed more recently by a 50th-anniversary edition, with separate chapters on the early and late medieval periods (Herring *et al* 2011a; Herring *et al* 2011b). Whilst there is no equivalent for Devon, Dartmoor was the subject of a series of papers published as a volume by the Devon Archaeological Society (Henderson and Weddell 1994). Dealing with both counties, *Medieval Devon and Cornwall: Shaping an Ancient Countryside* (Turner 2006) comprised a series of papers examining the medieval landscape in a number of areas, including looking at field systems and settlement, and at the landscape from religious and industrial perspectives.

Local landscape studies have also been undertaken as part of development-led projects, for example the Roadford Reservoir project in Devon, and Colliford in Cornwall, and as University-led programmes of research, such as on Dartmoor (Austin 1978; Fleming 1994). A joint survey of Bodmin Moor was undertaken by the Cornwall Archaeological Unit (CAU) and the Royal Commission on the Historic Monuments for England (RCHME), Volume II providing a summary of the post-Roman landscape (Johnson and Rose 1994). A separate study was undertaken on East Moor, Altarnun (part of Bodmin Moor), although the medieval aspect was incidental to the prehistoric (Brisbane and Clews 1979, 44-46). More detailed assessments of medieval settlements and landscapes have been carried out at Brown Willy, Bodmin Moor (Herring 1986; 2006); Holne Moor, Dartmoor (Fleming and Ralph 1982); Okehampton Park, Devon (Austin *et al* 1980), as well as the English Heritage survey around Challacombe, Devon (Pattison 1999).

Organisation of the Landscape

The distinctive landscape of the South West, with its dispersed settlement pattern and network of small enclosed fields and lanes, has long been assumed to be a product of developments in the Middle Ages. Balchin (1954) thought that the historic landscape of Cornwall had developed between the 12th and 14th centuries, whilst Hoskins (1952) regarded the 12th and 13th centuries as the formative period in the development of the Devon landscape. Hoskins (1952) also argued that since the number of *villani* in Domesday descriptions sometimes correlated with the number of early 19th-century farms, as plotted on the first edition OS maps, this probably indicated the locality of earlier Anglo-Saxon settlement. Hoskins' views on the importance of the 13th century corresponded with those of Postan (1966, 550) in the *Cambridge Economic History of Europe*, in which he stated that the valleys of Devon and much of the interior of Cornwall were not occupied until the 13th century. Hoskins (1954, 46-7) initially thought that mass emigration to Armorica (modern Brittany) had left land vacant for Anglo-Saxon settlers in the 5th – 7th centuries, although his subsequent research, and that of Finberg, Fox and the place-name scholar Padel, was to dispel this view (Finberg 1949; 1952; Fox 1971; Padel 1985).

More recent advances in knowledge have drawn on field archaeology and survey, morphological studies of the landscape, as well as documentary sources and place-name evidence. Hooke (1994; 1998) has examined Anglo-Saxon charter boundary clauses and compiled a complete corpus of terms relating to landscape and settlement found in Anglo-Saxon charters in the South West. For place-names, Cornwall has received more recent attention than its neighbour, with the production of a volume on Cornish place-name elements and a dictionary of major pace-names (Padel 1985; 1988), and there have also been summaries of the ecclesiastical influence on landuse patterns (Turner 2006b).

Figure 2.4: Medieval settlements in the parishes of St Merryn (left of dotted line) and Padstow (right of dotted line), with tre- and other Cornish names (after Preston-Jones and Rose, 1996, Fig 4, 144).

By the 1980s there was a consensus view that the late Roman landscape of the South West had remained largely unchanged into the early medieval period, on the assumption that it had been relatively un-Romanised (Preston-Jones and Rose 1986), although this view has more recently been contradicted by the findings of the Fields of Britannia project (Rippon 2015), and by recent fieldwork, for example at Ipplepen and Calstock. The most easily recognisable form of settlement through the late Roman and early post-Roman periods was the small enclosed settlement, known in Cornwall as rounds and often appearing with the prefix *car*, from Cornish *ker*, a fort (Pearce 2004, 30). None originate later than the 3rd century, with some continuing into the 5th-7th

centuries, the best-known example being Trethurgy, near St Austell (Miles and Miles 1973; Quinnell 2004). Also excavated in Cornwall were Grambla (Saunders 1972) and Carngoon Bank (McAvoy *et al* 1980), whilst in Devon examples include Hayes Farm, near Clyst Honiton (Simpson *et al* 1989) and Rudge, Morchard Bishop (Higham 2008). Rounds may only be one form of settlement type and it has been suggested that other, so far unidentified, unenclosed settlements may once have been more common (Rose and Johnson 1983,102-4). The usual interpretation is that rounds were more likely farming hamlets rather than defended sites, and their disappearance from both Cornwall and Devon suggests that their abandonment was an indigenous change, uninfluenced by Wessex, and therefore a relatively early development (Higham 2008, 232).

It was also apparent that some major reorganisation of the landscape of the South West had taken place subsequently, sometime during the 6th-8th centuries, with the emergence of a dense pattern of dispersed but nucleated unenclosed settlements, that is hamlets rather than farmsteads. These were distinguished in Cornwall by the place-name element *tre*-, 'farming estate' (Beresford 1964; Padel 1985, 227; Herring 2006a, 266). These new settlements were associated with a mixture of closes (enclosed fields held in severality) and small-scale open fields (Preston-Jones and Rose 1986). Comparison between the distribution of rounds and early medieval settlements in *tre*- showed overall similarities in distribution but also some contraction, particularly from upland areas, in the 6th and 7th centuries (Figures 6.1 and 9.6A). This is not to say that larger villages did not form part of the rural landscape of the South West. In Devon, for example, Hartland and Braunton are of note (Higham 2008, 241-2), although Hoskins (1954) considered them to be a feature of West Saxon settlement. It has also been postulated that the wholesale re-focussing of the landscape at this time was intimately connected with the establishment of new kinds of high status sites in the form of multiple estates, in particular ecclesiastical centres, seeing the conversion to Christianity as a major impetus in landscape development (Herring 2006a; Turner 2006b).

The thirteen hundred known settlements in *tre*- in Cornwall are almost all located in the core agricultural areas (Preston-Jones and Rose 1986). Dyer

(2002, 21-4) suggests that 'estates' typically contained around 50 ha. (125 acres), supporting four to five households, each with approximately 30 acres of mixed farming land (also Hatcher 1970a, 11; Finn 1973, 38). Beresford's (1964) analysis of 14th-century Duchy of Cornwall records suggests that hamlets of two to five messuages predominated, and on the Welsh pattern, Davies (1984-5, 76) has suggested that it seems probable that there were close kinship links between households.

There may also be a connection with the established medieval subdivision of the shire county, the hundred. In Wessex hundreds were administration units, each with a royal vill, and were first recorded in the Hundred Ordinance of the reign of King Edgar when they are thought to represent approximately 100 hides (Whitelock 1979, 429). For Cornwall, comparison has again been drawn with the administrative structure of early medieval Wales, in which *cantrefs* represented a division of a kingdom of approximately 100 *trefs* (Preston-Jones and Rose 1986), perhaps also organised into multiple estates, each with a religious and/or administrative centre or *Llys* (Jones 1972, 299-302). Williamson (2013, 28-9), however, has stated that multiple estates (as translated from the Welsh *maenol*,) were actually divisions of a *cantref*. In Cornwall, the hundreds of Trigg and Lesnewth contain approximately 100 *Trefs*, and Padel notes that Kerrier has 228, perhaps being a double hundred, as probably also was Pydar, which may originally have been divided into the smaller hundreds of Rielton and Pawton (Padel 1985, 227).

Upland Settlement and Field Systems

Deserted medieval settlements and evidence for medieval fields on the moors of the South West have attracted much attention over the past seventy years or so, in part because of their connection in the popular imagination with the climatic and pestilential ravages of the 14th century, but also because their remains are so tangible. Small deserted medieval settlements, characterised by the typical longhouse, are well known in the uplands of Cornwall, with twenty known sites on Bodmin Moor alone, a number of which have been excavated, including Goosehill (Andrew 1942), Garrow and Stuffle (Dudley and Minter, 1962-3; Austin 1985).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.5: The western fields of Brown Willy in the mid-13th century. The northern, western and southern boundaries were defined by streams, whilst on the east side there was a stock-proof boundary. (From Herring 2006b, Figure 43).

The well-known site of Brown Willy on Bodmin Moor has been described by Herring (1986; Figures 2.5 and 6.2). Other excavations include Smallcombe, St Cleer, excavated in 1868 (Blight 1868, 10), and a group of nine platform houses excavated by Baring-Gould at Trewortha (1892, 290). Other settlements have

been investigated on the commons and rough ground of north-east Cornwall, including Vendown (Dudley 1955-6, 147-8), and Treworld (Dudley and Minter 1966). Other shrunken settlements in this part of Cornwall include Goscott, Week St Mary and Brown Gelly, St Neot (Preston-Jones and Rose 1986).

Fox and Padel (2000) considered medieval land tenure and enclosure of Cornish strip fields, mainly through analysis of the Arundell family archive. Further surviving or relict strip field systems have been recorded in other marginal landscapes, such as at Treskilling, Luxulyan (Johnson and Rose 1994; Preston-Jones and Rose 1986, fig 8); with outfield strips identified in West Penwith, at Treen Common and Chun Downs, on Kit Hill and at Godolphin (Herring and Thomas 1988; Herring 1997; Taylor 2002; Dudley 2003). Medieval ridge-and-furrow has been identified in several locations, on Garrow Tor and at Stuffle, as well as at Brown Willy (Figure 2.5), and some seem to be spade dug rather than created by ploughing (Dudley and Minter 1962-3, 278; Austin *et al* 1980, 2; Herring 2006b, 90).

In Devon also there has been some concentration of survey and excavation on the high moors and other marginal landscapes, with at least 130 deserted medieval settlements identified on Dartmoor (Gerrard 1997, 71; Newman 2011). At Beere in North Tawton, on the Culm Measures to the north of Dartmoor, a complete plan of a medieval peasant house was excavated for the first time, in 1938-9 (Jope and Threlfall 1958). At Dean Moor, Aileen Fox (1958) excavated an upland settlement with two buildings, a two roomed dwelling house and larger cattle byre or longhouse and pen.

In the early 1960s Catherine Linehan (1965; 66), undertaking both fieldwork and documentary research on Dartmoor, identified a large number of abandoned or shrunken medieval and later habitation sites around the fringes of the moor. Mrs E. Marie Minter carried out excavations between 1961-75 at four sites on the east side of Dartmoor, Hound Tor I and II, Hutholes and Dinna Clerks, which were published after her death by Guy Beresford (1979). These comprised a mixture of small hamlets and, in the cases of Dinna Clarks and Hound Tor II, single longhouses. Study of pottery from all four excavations would suggest that

most were established after the middle of the 13th century and abandoned by the middle of the 15th century (Allan 1994, 142-5).

On the south-east side of Dartmoor, the landscape around Holne Moor was surveyed by Fleming and Ralph (1982) and consisted of a small hamlet with an extensive field system, comprising many low banks, known as Broad Rig, running up and down the slope. These were succeeded later by infield strips, sometimes running along the slope.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.6: Earthwork survey of the deserted settlement at Hound Tor I, showing the larger longhouses (a-d), other probable domestic (e-f) and out-buildings (g-h), curtilage and three barns (j-l) containing grain drying areas. (From Newman 2011, fig 7.18).

Dating colonisation of the uplands

Settlement of the uplands of Cornwall and Devon is usually regarded as a late and temporary development (Herring 1986; Johnson and Rose 1994), and none of the excavated sites on Dartmoor would seem to have been permanently occupied before the 13th century (Allan 1994, 142-5). Postan (1966, 551-2; 1973, 14), with a particular reference to the southern slopes of Dartmoor, outlined a concept of colonisation of the moors in the 12th and 13th centuries,

regarded as due principally to population pressure. These areas are certainly more marginal for crop production than the lowlands, having a wetter and colder climate, with thinner and stonier soils, and this is shown in the choice of oats and rye as the principal crops during this time, as indicated by pollen analysis from near Hound Tor. But they should perhaps only be seen as marginal in terms of arable production, being used for rough grazing, peat digging for fuel and the production of charcoal (Fox 2012, 11), and for tin streaming, particularly during the 12th and 13th centuries (Fox 1994, 167).

From the late medieval period onwards there is evidence of settlement abandonment and it has popularly assumed that desertion resulted directly from falls in population levels in the late 14th century after the Black Death (Postan 1973, 14; Roberts 1977, 110). This may be true of some hamlets, such as Hound Tor I, but many settlements were abandoned later, from the loss of traditional occupations, such as tinning and warren management, in the 19th century (Linehan 1966). A theme that will be dealt with in detail by this thesis is the proposition that many settlements contracted into isolated farmsteads rather than being abandoned (Beresford 1964; Herring 1986; Fox 1989; Johnson and Rose 1994; Henderson and Weddell 1994); whilst others split into separate, smaller settlements, as indicated by place-name elements such as Higher and Lower, Great and Little (Herring 2011b, 290).

Social change may well have been a major factor in settlement abandonment in the late medieval period. Turner (1984) has suggested that the increasing practice of shareholding allowed tenants to increase their capital and to loosen the tenurial bonds to their landlords, and this may indeed have led to the disintegration of the Brown Willy hamlet on Bodmin Moor some time before 1275 (Herring 2006a, 59). On Dartmoor, there seems to have been a gradual change from a mixed economy, with an emphasis on cereal production, to a greater pastoral component from the late 13th century, before the Black Death (Henderson and Weddell 1994, 134). Interestingly, Fox (1994, 134-5) thought that settlement desertion on the moorland fringe of Dartmoor was overstated and that it may have been more common on the Culm Measures, even though it

was not so visible in the archaeological record. As will be seen, this will be a core finding of this thesis.

Rough Grazing and Transhumance

It is estimated that rough ground covered approximately one third of Cornwall and a large part of Devon during much of the Middle Ages (Herring 2006a), and as well as Bodmin Moor and Dartmoor there were numerous and extensive local moors and commons. Rough ground was used for grazing, and for exploitation of fuel and bedding material. It was sometimes contained within the ring fences of townlands, and so common to hamlet tenants, but could be undivided, and so with grazing rights for all, but with specific rights of extraction for fuel, stone and other resources by individual hamlets, as was the case with Boswednack, Treen and Gear Common in Zennor, west Cornwall (Dudley 2011). More extensive commons were shared by several estates, as was the case with Altarnun East and West Moors in east Cornwall (Johnson and Rose 1994). In the South Hams of Devon stock was grazed on sea cliffs or taken up to Dartmoor for the summer months (Fox 1994; 2005; 2012).

The seasonal movement of cattle and sheep onto the moors, or transhumance, is attested to both historically and by place-name evidence and allowed for the freeing up of the lowlands for more arable. Harold Fox's (2012) important study *Dartmoor's Alluring Uplands*, published posthumously, throws much new light on the practice. Fox describes how the central part of Dartmoor had all the attributes of a manor from around 1240, having ceased to be a royal forest in 1239, and most of the inhabitants of Devon had grazing rights there, although a fee per animal was usually paid. Certain farms on the periphery of the moor had so-called *venville* rights, where for a fixed fee they could graze as many cattle as they wanted on the moor, as long as they were driven off the moor at night (Fox 1994; 2012). Fox (1996; 2012) also pointed to the existence of detached territories on the outer moors from the late Anglo-Saxon period, linked to lowland settlements, such as between Cudlipp (town) with Tavistock (Figure 10.10).

In Cornwall seasonal movement of livestock also appears to have been widespread and early (Padel 1985; Herring 1996; 2009). This is indicated by place-names, particularly those with *hendre* (old or winter homestead), and *havos,* (summer dwelling), revealing the seasonal movement between the two classes of settlement (Figure 2.7). Many *hendre* settlements are found throughout lowland Cornwall, some being over 10km from rough ground, for example in Gerrans, Morval and St Germans, whilst place-names with the element *havos* are generally in moorland areas (Herring 2011a, 265-6). On Bodmin Moor, there are clusters of small rectangular huts perhaps associated with this activity, for example at Brockabarrow Common, Brown Willy and Leskernick and Stowes Hill (Herring *et al* 2011a, 265). Two possible transhumant huts excavated on Davidstow Moor were constructed of turf and may date to the 15th or 16th centuries (Andrew 1942, fig.5).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.7: Transhumance place-names in Cornwall plotted against a simplified historic landscape characterisation (after Herring et al 2011a, fig. 1).

Anciently Enclosed Land

Settlements and distribution

Whilst most survey and excavation has been undertaken on the moors and commons of the South West, where survival of remains tends to be good, comparatively little is known of the lowlands where settlement and agricultural activity has been that much more intensive and of long-standing. What is clear, however, is that by the late medieval period both Cornwall and Devon were

characterised by dispersed settlement, with large numbers of isolated farmsteads, many replacing small hamlets through shrinkage or division of townlands into two or more parts (Herring 2011b, 290). In north-east Cornwall in the early 1990s, field survey in the hundred of Stratton identified earthworks and numerous shrunken hamlets in farmstead enclosures, and it was estimated that there were 179 known settlements in this part of Cornwall with evidence for shrinkage or desertion (Herring and Thomas 1993). The number of lowland settlements excavated in Cornwall is also very limited, with perhaps those buried by wind-blown sand at Gwithian and Crane Godrevy being the best known (Thomas 1964, 41-43; 1969; Nowakowski *et al* 2007). A number of settlements have also been excavated on the Culm Measures and in Okemampton Park, west Devon (see Chapter 6).

Strip fields

Until the mid-20th century, evidence for open field farming was believed to be largely absent from the South West, or to be present in certain exceptional circumstances. Where strip fields were identified in the south-west Peninsula, however, open field agriculture tended to be seen in terms of being an alien implantation by Saxon settlers, often centred on the towns (Henderson 1935, 67), and this view has persisted in some quarters into modern times (Payton 1996, 95-6). Pounds (1944, 116-20) and Rowse (1941, 33-6), documented several medieval strip field systems around Cornish hamlets surviving into the 16th and 17th centuries. Finberg (1949; 1952) drew attention to strip fields at Braunton in north Devon, the so-called 'Braunton Great Field'. The fields are divided by low turf banks known as 'landsherds' and examination of documents dating to 1324 showed that land was held as intermixed parcels and had once been more extensive. Finberg (1949, 182; 1952, 279) also realised that open fields had once been more widespread throughout Devon, based both on documentary research plus fossilised evidence of strip cultivation identified in eighteen of twenty-four randomly sampled Devon parishes. On the wider scale, Flatrès (1957, figs. 37 & 39) compared Cornish strip fields with those of Ireland, Wales and the Isle of Man, using tithe maps and large-scale OS maps, whilst Shorter *et al* (1969, fig 26), produced a map showing fossilised strips scattered throughout Devon and Cornwall, though provided little in the way of an accompanying interpretation (Figure 7.2).

There has been an inevitable temptation to compare the strip fields of the South West with the classic open field agriculture of the English Midlands, although they clearly follow a different pattern. Two important strands of work in this regard were developed from Harold Fox's (1971) PhD on the field systems of Devon and Cornwall, and John Hatcher's 1967 PhD (published 1970) on the economy and society of the later medieval Duchy of Cornwall, both studies being largely documentary based (Hatcher 1970a). Fox (1971, 33, 52-1) reviewed a range of documentation to show that strip fields had been widespread in Devon and Cornwall, which included a study of strip fields in Axminster parish in east Devon Fox (1972, 110-21). Hatcher (1970a, 17) thought that cultural and geographical determinism produced isolated farms within enclosures and also compared the agricultural landscape of the South West with the classic pattern of Midlands' manors, although pointed to the looser structure of manorial holdings. Fowler and Thomas (1962, 78) suggested strip fields in west Cornwall were more closely related to Welsh sharelands than to English open fields. By the 1970s, it was a common held view that by the early 14th century most Cornish farms were located within small hamlets with subdivided field systems around them, though with consolidation and enclosure taking place at a relatively early date (Fox 1971; 1975).

As with Devon, there are surviving examples of strip fields in Cornwall, although few in number. Forrabury Stitches above Boscastle on the north Cornish coast, were shared between twenty-one tenants according to the 1842 tithe enquiry and the strips are unenclosed today (Wood 1963; Dudley 2003). There are also unenclosed strips at nearby Bossiney and strip lynchets at Willapark, Tintagel (Herring 2006; Wood 1963; Taylor 2002; Dudley 2003). Strip fields fossilised in later field boundaries have also been described in West Penwith in the far west of Cornwall (Johnson 1980), and at Tregonning Hill, Breage (Johnson and Rose 1982); Belowda Beacon, Roche; Rosenannon Down, St Wenn; and Treskilling Downs, Luxulyan (Herring 2006a). All of these examples have fossilised elements of sub-divided arable apparent in the modern field patterns (Herring 2006a). Late survivals of unenclosed strips are shown on the Lanhydrock Atlas of 1694 (Pounds 1945; Holden *et al* 2010; and see Figure 2.8) and on many

tithe maps of the 1840s, for example for St Mawgan in Pydar, Veryan, St Minver, St Eval, Gorran, Mullion and Gwithian (Fox 1973).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.8: Tenements and common land in Predannack Wartha, Mullion, as represented in the Lanhydrock Atlas, 1694, described by the authors as a 'fine example of strip fields with houses around the townplace'. (Holden et al *2010, II, 52-53, 196-7).*

Well-defined fossilised strip patterns, indicated by slightly sinuous boundaries in the modern fields, are also present around some Cornish towns, including

Week St Mary, Kilkhampton, Helston and Marazion, and it has been suggested were perhaps the product of early enclosure (Herring 2006a, 61-3).

Small strip field systems are also known at Challacombe, on the eastern side of Dartmoor, consisting of large subdivided fields or 'wares' enclosed by irregular sinuous boundaries (Newman 2011, fig 7.5; and see Figure 2.9). A map of 1787 shows that the strips were occupied by many different tenants with intermixed holdings and although not on the impressive scale of Braunton Great Fields they are probably more typical of the South West (Pattison 1999). There is also evidence that the fields at Challacombe were once more extensive, as adjacent field boundaries seem to fossilise and repeat the field pattern. This also appears to be the case in discrete field systems on the west side of Dartmoor, in the area of Peter Tavy and south of Godsworthy (in the local study area), and in little patches of moorland in mid- and north Devon, for example south of Newland Cross in Witheridge and on Witheridge Moor (Turner 2007, 103). The strips at Challacombe follow the line of the contours, as is usually the case in Wessex, whereas it is more usual in Devon and Cornwall for them to be oriented to follow the slope down. It is also of note that the reversed–S or aratral curve shape to the boundaries of many strip fields in the English Midlands, thought to be a product of the use of ox-drawn ploughs executing a wide turn at the end of each furrow, is rare in Cornwall and Devon (although there are examples in the local study area, see Chapter 7). More typical are reversed J–curves, turning to the left at the downhill ends, and it has been suggested that ploughing was mainly downhill (Eyre 1955, 86). Medieval fields in the South West were probably surrounded by hedge banks, often mentioned in charter boundary clauses, for example at Trerice (Herring and Hooke 1993). In later years, they developed into the well-known Cornish or Devon hedges, essentially stone-faced earthen banks (Herring 1986; Bull 1999; and see below).

Convertible Husbandry

Whilst there are exceptions, such as Braunton, the majority of open field systems in Cornwall and Devon bore little resemblance to the large two- and three-field system known from the English Midlands, and certainly by the 17th and 18th centuries were subject to mixed farming of a form at that time known

by the term convertible husbandry. Convertible (or ley or up-and-down husbandry) was a system of rotation which mixed pasture and arable regimes, and was spread through much of England in the early post-medieval period, with the greatest popularity during the period 1590-1660, including in parts of the Midlands (Overton 1996, 117). Its origins in the South West, however, are much earlier, as is evidenced by leases dating from before 1350 (Finberg 1969a, 98; Broad 1980, 77-89; Fox 1991), and is also suggested by pollen records (Fyfe 2006; Rippon *et al* 2006). Indeed, its association with the region is linked with common terms for the practice, such as 'Denshiring' or 'Devonshiring' (Fox 1991b, 310).

This is clearly demonstrated by Rippon's (2012) study of the landscape character of east Devon, one of the best agricultural areas in the county, which showed a relative lack of former open field when compared with adjacent areas of west Somerset and Dorset. The practice differed in that there were generally many more, smaller enclosed fields (Dodgshon and Jewell 1970; Fox 1971, 1991b; Herring 1986; 1999; 2006a; 2006b). Under this regime, most fields were subject to alternating grain and grass crops, with most fields left as pasture, or ley (rather than fallow) for long periods. Accounts differ slightly as to the number of fields in a convertible husbandry regime. Richard Carew describes a rotation in which fields would be subject to two crops of wheat and two of rye 'then driven to give it at least seven or eight years leyre (ley)' (Halliday 1969, 102). In 1668, Samuel Colpresse reported that in Devon a six-year course was generally followed, with two crops of barley, then oats, peas and then oats again, followed by ley (Finberg 1969a, 104). Herring (2011b) has described the typical number of fields in a unit as being between eight and fourteen, depending on the number of fields under grass ley. In any one year, only two or three fields would be under arable cultivation, with wheat sown in the winter and barley and oats in the spring, with the rest used for the production of hay and for grazing. Land would be held in shares, with intermixing of narrow strips, defined by low banks, scattered across the fields in a smaller equivalent to the Midland system (Herring *et al* 2011b, 289). The practice was also flexible, as only a portion of fields would be under crop at any one time and yields could be increased by shortening the ley.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 2.9: Strip cultivation and later enclosure at Challacombe, based on RCHME 1:2500 survey. Unusually for Devon, the strips follow the contours rather than the hill slope. (From Newman 2011, fig 7.5)

In any one year there would be one field under preparation for a new crop. This could initially comprise paring off the grass sward, allowing it to dry and then burning it to destroy the grass and weeds, a process known as beat-burning (Finberg 1969, 91-4). This might take place in the spring, and the ashes could be mixed with organic farmyard debris, calcareous beach sand or ditch scrapings, to act as a fertiliser / soil modifier (Herring 2006a, 69). Such preparation might be more suitable for the growing of rye, which requires less

nitrogen (Finberg 1969, 108), and the process is mentioned in the accounts for Leigh, Milton Abbot, for 1246 (Finberg 1969a, 94).

Beyond the core areas of cultivation, outfields were primarily used for grazing and only occasionally for cultivation, and were also sometimes divided up into strips, sometimes with outer, stock-proof enclosing boundaries (Fox 1973). Hatcher (1988) showed that intensive farming was in place in the South West in the 12th century, including enclosed fields with rough grazing beyond. Fox (1991b) dated the practice to at least the 13th century, although it does seem to have been in existence by the late 10th or early 11th centuries, where it is mentioned in charter boundary clauses (Hooke 1994).

Enclosure and Field Boundaries

The timing and processes of enclosure in the South West forms a key element to this thesis and will be discussed at greater length in Chapters 7, 9 and 10. Herring (2011b, 289-90) outlines a process of enclosure in Cornwall beginning as early as the last quarter of the 13th century and in the case of some systems lasting through into the 19th century (with examples such as Forrabury Stitches still in existence today). Yelling (1977, 27) has also noted that piecemeal enclosure was important in the South West between the 16th and 18th centuries.

The rural landscape of Cornwall and Devon is today characterised by miles of surviving hedgebanks, typically substantial structures of earth which are often faced in local stone and sometimes topped by trees and shrubs. They are known locally as either Cornish or Devon hedges, depending on location, and Francis Pryor (2010, 306) thought those of Devon to be sometimes larger and thicker than those of Cornwall. Hatcher (1970a, 11) describes the body of such hedges as being formed by earth thrown up from ditches, and being topped by hawthorn, hazel, oak and ash, providing a source of timber and also a handy windbreak for livestock. Finberg (1969a, 50) describes the process of enclosure, involving the setting out of a boundary ditch, with the spoil used to create a bank, which was then topped with coppice wood, such as oak, ash or hazel. Indeed, in the 18th century William Marshall regarded hedges as being the main source of timber for local communities (Finberg 1969a, 66), and in the early 17th century, a surveyor for the manor of West Antony in south-east

Cornwall, noted that timber in hedges made up for the lack of woodland elsewhere (Fox and Padel 2000, lxxiv). There is sometimes specific mention of timber not being present, however, such as on the manor of Caradon Prior, covering Linkinhorne and North Hill (Fox and Padel 2000, lxxxiv-v). Areas of late enclosure, with their straight hedgelines, were often planted without solid structures. For example, those on the Blackdown Hills of east Devon are typically of beech (Rippon 2012, 121).

Place-name studies

The study of place-names has proven invaluable in many areas of medieval landscape studies in the South West, from reconstructing territorial units, to charting the progress of English settlements, and can also be descriptive of both the landscape and the functions of individual settlements and localities. In Cornwall, Brittonic place-names survive in numbers, many suggestive of an early medieval date (Padel 1985, 1988; Rose and Preston-Jones 1995), except in a few areas in the east (Padel 1999; Turner 2006). In Cornwall, basic place-name information compiled by Oliver Padel was transferred to 1:25,000 scale maps by the Cornwall Archaeological Unit, revealing some interesting patterns (Preston-Jones and Rose 1986). Relatively little recent work has been undertaken on the place-names of Devon, however, with the volume produced by the English Place-Name Society now in need of revision (Gover *et al* 1931).

Discussion

For much of the history of medieval landscape studies in England there has been a certain concentration on village formation and on open fields, with the Midland system somehow epitomising our concept of rural England in the medieval period. In recent years, however, there have been attempts to shift the focus away from the Central Zone to look at other regions of England (Rippon 2012).

For the South West, there has also historically been an understandable concentration on the medieval farming settlements and field systems of the upland parts of the region, particularly Bodmin Moor and Dartmoor, which may

represent late colonisation of relatively short duration. Comparatively little fieldwork has been undertaken in the more intensively settled lowlands, and it is here that morphological and cartographic approaches to landscape studies have generally been applied. There has also been a particular emphasis on the existence of open fields in Cornwall and Devon, though little consensus on just how dominant a feature of the rural landscape they were. A variant of open field agriculture, termed convertible husbandry, was practised in the South West from at least the late Middle Ages, alongside more recognisable open fields systems, the most impressive illustration of the latter being Braunton Great Fields in north Devon.

It is also apparent that researchers have tended to be constrained by county boundaries, with limited cross-comparison between Cornwall and Devon, except when at its most palpable, such as settlement and transhumance on the uplands of Bodmin Moor and Dartmoor. More recent studies have shown that there is much to unite the historic landscapes of the region, however, whilst at the same time pointing to more localised differences within both counties, neither of which are constrained by the political reality of the county border.

3

Physical and Cultural Aspects of the Landscape: Defining Pays

Introduction

The following chapter sets out to characterise the physical and cultural landscape of the South West Peninsula, with the explicit aim of identifying a series of discrete *pays*: smaller constituent regions with their own distinctive character and farming regimes, known as 'pais' in Norman French and often referred to as 'countrie' by English writers of the 16th and 17th centuries.

The first sections provide a broad survey of the physical aspects of the region, examining the geology, topography, drainage, soils and climate of Cornwall and Devon, as well as the agricultural potential of the region's soils. The second half of the chapter then goes on to look at aspects of human agency, by first looking at how the region was perceived by travel writers and topographers of the 16th, 17th and 18th centuries, before moving on to the more empirical approach employed in the Board of Agriculture reports of the early 19th century. That these early accounts of the landscape were written exclusively by the 'learned' in society, however, should not diminish their usefulness. Although some, such as those great 18th-century travellers, Celia Fiennes and Daniel Defoe, were only passing through the landscape others, such as the Cornish antiquarian Richard Carew, had a closer connection and greater familiarity with the region of which they wrote. For the common folk, some idea of how the landscape was perceived, and different areas distinguished, may be intimated by local legend and folklore, and it is to this area of study that we then turn. That said, these are

generally views of locality relating to the post-medieval period, and the earlier medieval world could have been very different.

Using a mixture of physical and environmental criteria and also later perceptions of the landscape, the final section defines a series of *pays*, which will then be used in chapters which follow to examine the relative contributions of environmental factors and of human agency on the formation of the historic landscape.

Physical Determinants of the Landscape

The Geological Foundations (Figure 3.1)

The structure of the landscape, its topography and drainage, and the covering of soils that allow for human exploitation through grazing and agriculture are all, to an extent, determined by underlying geology. For the South West Peninsula, the raised areas of granite, most conspicuous in the upland areas of Bodmin Moor and Dartmoor, is perhaps its defining physical feature, continuing westwards as a series of progressively lower heathland areas, to reach the Land's End Peninsula and, beyond, the Isles of Scilly.

The source of much of the region's mineral wealth, the granite was intruded into earlier sedimentary rocks, laid down in a shallow sea on the southern edge of the Old Red Sandstone supercontinent in the Devonian and Carboniferous periods. Making up much of the lower lying areas of Cornwall and Devon, these deposits were formed over millennia from the erosion of the mountains to the north and hardened by heating and pressure during a later phase of prolonged volcanic activity into grey, slatey rocks, that in Cornwall were known by miners as 'Killas'.

Some of the oldest formations of the region, of Lower and Middle Devonian age, are located in a band through central and south-eastern Cornwall and south Devon, where they are comprised of interbedded mudstones, siltstones and sandstones which were deposited in rivers and alluvial fans. On the north

Cornwall coast, outpourings of underwater lava in the Upper Devonian have produced pillow lavas, visible in cliff sections at Pentire Point, whilst in the uplands of Exmoor and the Quantock Hills, to the north, there is a complex sequence of sandstones, mudstones, siltstones, and limestones, laid down in the Middle and Upper Devonian. It was also during the Devonian that a section of the ocean crust, of much older Pre-Cambrian age, was pushed up against the continental mass to create what is now the southern part of the Lizard Peninsula, which is thus composed of an array of older, igneous and metamorphic rocks, including gabbro, granite and serpentine.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.1: The Geology of South West England, showing Carboniferous sediments overlying older Devonian rock, intruded by the major granite masses, with the local study area outlined in green. Younger Permian and Triassic rocks are mainly confined to the east of the region. (From Moon 2010, Fig. 2).

This broad sequence of marine deposition was continued into the succeeding Carboniferous period, in the later stages accompanied by an increase in Volcanic activity which caused widespread folding and faulting of the rocks and the deposition of lava and tuff, consolidated volcanic ash. Across the north-eastern corner of Cornwall and a broad swathe of west and central Devon, thick

deposits of mainly shales and sandstones, with outcrops of limestone, and thin layers of a soft brown coal, known in the dialect of west Devon as ‘culm’, have given rise to a distinctive plateau landscape of rolling ridges, known as the Culm Measures.

Starting in the late Carboniferous, a phase of mountain building known as the Variscan Orogeny saw massive compressive forces produce some spectacular examples of folding and faulting, as can be seen on the north Devon coast at Hartland Point, with low heating of shale deposits to form harder slates. It was during the later stages of this episode, in the late Carboniferous and into the Permian, that a large mass of granite was intruded into the earlier sedimentary rocks to form the Cornubian Batholith, a continuous mountain range once rising to heights approaching 3,000m AOD. Subsequent erosion of the surrounding soft Devonian and Carboniferous strata has left exposed a series of granite peaks, starting with the Isles of Scilly off Cornwall’s west coast, and progressively gaining in height from west to east across the region – the Land’s End Peninsula, the highland moors of Carnmenellis and St Austell (Hensbarrow) Downs, to the more prominent Bodmin Moor and Dartmoor. Bearing a wide range of minerals, including metal ores such as tin, copper, lead and zinc, the granite when quarried is a durable building material and used to great effect in the medieval churches (Figures 3.2 and 3.3) and manor houses of the highlands, where it is often referred to as ‘moorstone’. In degraded form, it produces kaolin, or china clay, from the constituent feldspar, the exploitation of which is one of the few remaining industries of modern Cornwall.

Figure 3.2: Parish church of St Peter (originally St Petroc), Lewtrenchard, Devon, mainly dating from the 15th century. The building is constructed of granite and slate rubble, with granite quoins and with a slate roof (Photo – author)

Eastern Devon to the west of the Blackdown Hills is characterised by the New Red Sandstone formation, composed of interbedded red breccias, conglomerates, sandstones and marls, laid down in the Permian era under sub-tropical arid conditions, giving the soils of this region their distinctive red colour and the epithet 'Red Devon'. Further east is a band of Triassic sandstone (Bunter Beds), red silty mudstones of the Mercian Mudstone Group (Keuper Marls) with, in the Blackdown Hills, a thick deposition of Cretaceous greensand which, in places, is capped by more recent clay-with-flints deposits.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.3: Cullacott, Werrington, Cornwall, a late 15th-century through-passage house, with 16th- and 17th-century additions. The building is constructed of slate stone rubble walls (shillet). Quoins and some window and door detailing is in granite and there are some cob sections to the building. (http://www.cullacottholidays.co.uk/)

The Topography of the South West Peninsula (Figure 3.4)

In describing the landscape of Devon, Hoskins (1954, 14) pointed to its outward complexity, and to the appreciable difficulty of producing simple descriptive summaries of its form in the face of an 'intricate landscape', comprised of 'thousands of little streams in their combes, hills tumbling away in all directions, ragged and indented coasts, and a variation of surface every mile or so'. Looking beneath this superficial impression, Hoskins also recognised a 'few fundamental facts' which helped to make sense of the totality of the landscape (Hoskins 1954, 14). Certainly, for west Devon and Cornwall as a whole, there is a fundamental contrast between the highland moors and the lower lying areas, and with the drowned river valley mouths and the multitude of small coves of the south coast, and the high, rugged coastline of the north coast. Added to this, and central to the local study area that will be defined in Chapter 4, is the basin of the River Tamar, dividing Cornwall and Devon, in modern political terms at least.

In the far west, the West Penwith or Land's End Peninsula sits mainly on granite bedrock, the moorlands of the northern part rising to 250m AOD at Watch Croft. The peninsula narrows to the east, pinched by the wide sandy bays of St Ives, on the north coast, backed by extensive sand dunes, or towans, and to the south, by Mounts Bay. The south-easterly sweep of Mounts Bay merges with the Lizard Peninsula, jutting southwards into the English Channel and reaching the most southerly part of mainland Britain at Lizard Point. Partially separated from the main body of Cornwall by the Helford River, to the north rises the high heathland of Carnmenellis, between Redruth, Helston and Penryn, the next elevated granite plateau in the sequence. Between Perranporth and Newquay in the north is an exposed coastline with many beaches with high cliffs in the east and extensive dunes in the west. The north coast is split in two by the Camel estuary**,** with its gently sloping and undulating valley sides and large expanse of water, with extensive mudflats and saltmarsh in the estuary, and with large areas of coastal sand dunes.

On the south coast, the Roseland Peninsula is bounded by the basin of the River Fal to the west and by St Austell Bay to the east, consisting of a high farmland plateau cut by small, wooded valleys draining into the Fal and large coastal bays. Further round, and inland and to the north of St Austell Bay, is Hensbarrow Downs, rising up to Hensbarrow Beacon at 312m AOD. This is the second largest area of upland grazing in Cornwall after Bodmin Moor, although is now dominated, and scarred, by the open cast pits of the China Clay industry.

East Cornwall is dominated by the uplands of Bodmin Moor, an open exposed heathland with high granite tors and rocky outcrops, a shadowy presence which can be seen from much of central and eastern Cornwall, and from far into Devon. Until the early 19th century known as Fowey Moor, here can be found the two highest points in Cornwall, in the peaks of Brown Willy (417m AOD) and Rough Tor (400m AOD), with the lesser heights of Kilmar Tor and Caradon Hill to the east. Where drainage is poor marshes have formed, although these often dry out in the summer months. Large expanses of the moor are composed of rough pasture or are overgrown with heather. The many rivers and streams draining off the moor cut down through the moorland edge, in places forming

deep gorges with damp deciduous woodland, whilst on the lower fringes of the moor there are small pockets of enclosed pasture.

Surrounding the high granite of Bodmin Moor, the undulating slate plateau of central and east Cornwall, formed of the Cornish Killas, nevertheless exhibits some internal variation, as it tilts down from north to south. On the north coast there are some of the highest cliffs in Cornwall, rising to 240m AOD at Tresparrett Downs. Behind the coastal strip is the Delabole plateau, a broad topped undulating ridge of slate, shale and limestone, with the highest point at Hendraburnick Down, at over 300m AOD. To the south and south-east of the moor, the sloping plateau is intersected by some of the main river valleys in south-east Cornwall, the narrow steep-sided valleys leading to wide tidal estuaries, or drowned rias, such as that of the Fowey.

To the east of the Tamar, south Devon shares many of the same characteristics as east Cornwall, with rounded hills separated by many steep sided, wooded river valleys. Along the south Devon coastline there are also low cliffs, raised beaches and caves, and drowned rias reaching far inland. To the east, from Bigbury Bay, is an open elevated and farmed coastal plateau, and on the southern coast is the Kingsbridge estuary, a ria valley with tidal creeks and tributaries extending far inland. This landscape forms a part of the South Hams, a settled farming landscape to the south of Dartmoor, deeply incised by the scenic estuaries of the Yealm, Erme and Avon. On the east side are Start Bay and Torbay, with a gently rising plateau behind, leading northwards to the estuary of the River Exe.

The great mass of Dartmoor rises above the landscape of south-central Devon, defining the eastern part of the region and, at 954 sq km, is the largest exposed area of granite in southern England. The greater part of the moor is comprised of the Dartmoor Forest on the western side. Here, the landform slopes down gently from north to south, the result of Alpine mountain building processes, which means that the moor reaches its highest points in the north. The central western expanse of heather and grass moorland around Two Bridges is punctuated by tors and jagged rock outcrops, with slopes strewn with granite

boulders and shattered rock clitter. Large expanses of blanket bog are the source of many of Devon's rivers, including the Dart, Teign and Taw. To the south is another upland plateau covered with blanket bog and mire, which similarly feed into the main rivers of south Devon, including the Plym and Avon. The north-eastern moor above Ashburton is lower lying, with a farmed landscape which is mainly pastoral, with pockets of arable, and with steep-sided and wooded valleys, such as the Teign and Dart, and rolling hills, many with areas of open heathland.

The Culm Measures is an open plateau much dissected by river valleys, extending in a belt from the north Cornwall coast in the west, through west and central Devon, and from Barnstaple Bay in the north, southwards to the foothills of Dartmoor. The landscape is in places steeply undulating, often with treeless ridges separated by many small valleys. The underlying rocks give rise to poorly drained, low quality soils, mainly used for pasture, with extensive areas of culm grassland comprising purple moor grass, mires and fens. A range of low hills, known as Broadbury Ridges, extends westwards from the north-western edge of Dartmoor, part of the Culm Measures and now mainly given over to pasture. To the north lies the expanse of Exmoor, an open upland and windswept plateau, deeply incised by combes containing fast flowing rivers and streams. In the west, the moor terminates at Barnstaple/Bideford Bay and the Taw and Torridge estuary.

To the east of the Culm Measures are the Devon Redlands (or 'Red Devon'), a landscape of low lying gently rolling hills, with fertile farmland cut by flat bottomed and open valleys. The eastern boundary of the region is, in effect, defined by the Blackdown Hills in the south and by the Quantocks in the north, the two land masses cut by the Vale of Taunton Deane. The Blackdowns have a steep wooded scarp face to the north, but dip more gently down to the south, are wide open and windswept on the summit and are dissected by steep sided valleys. The Quantocks curve in from the Bristol Channel, with ridges covered in open moorland and heathland.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.4: The topography and major geomorphological features of South West England, with the local study area outlined in red. The map shows the major upland areas of the peninsula, the main elements of the drainage pattern and the occurrence of alluvial deposits in the river valleys. (after Webb, in Kain (ed) 2006).

The Drainage System (Figure 3.5)

From the heights of Bodmin Moor, Dartmoor and Exmoor flow many of the major rivers of the region, including most tributaries of the Tamar. The Tamar itself begins its life close to the north coast of Cornwall, on the moors of the Culm Measures, and follows a southwards course to the English Channel, widening out into an estuary between Saltash and Plymouth. In its upper reaches, the river flows through gently rolling countryside, fed by rivers such as the Ottery, rising near Otterham in north-east Cornwall, and Devon's River Carey. In its middle reaches, the river cuts through a granite outcrop that constricts its flow into a narrow, steep-sided, winding valley. Further on, several

rivers and streams flow down from Bodmin Moor and Dartmoor to feed into the Tamar. The Inny rises near Davidstow on the northern margin of Bodmin Moor, flowing into the Tamar to the south of Launceston. The Lynher also rises on the north-east side of the moor, following its eastern fringes down to a point near St Germans, before entering the Tamar at the Hamoaze, the estuarine stretch of the river. The Lynher itself is fed by a number of tributary rivers, the largest of which is the Tiddy. From the western side of Dartmoor many other rivers and their tributaries flow into the Tamar, including the Lyd, which passes through the dramatic Lydford Gorge before entering the Tamar near Lifton, and the Tavy, converging with the Tamar above Plymouth.

The Tamar is not the only beneficiary of the relatively high levels of rain that fall on the high moors. From the north side of Hendraburnick Down on Bodmin Moor, the River Camel flows into the Celtic Sea at Padstow, where it forms a wide sandy bay. The rivers Fowey, East and West Looe and Seaton also rise on the moor, flowing southwards into the English Channel to the south. In west Cornwall the major river system is that of the Fal, entering the Channel at Carrick Roads, with the Helford River joining Carrick Roads from the west.

Similarly, many of Devon's other major rivers trace their origins to the heights of Dartmoor, including the Plym, Yealm, Erme and Avon, flowing southwards, and the Dart and Teign flowing eastwards, into the English Channel. Central and western Devon north of Dartmoor is primarily drained by the Taw and the Torridge, the former rising on the northern flanks of Dartmoor. The River Torridge begins on the Culm Measures above the source of the Tamar, flowing eastwards as far as Hatherleigh, before turning northwards. Here, it is joined by the Taw, the two river systems converging on the north coast in a wide and complex estuary between Bideford, Barnstaple and Braunton, a wide, open bay with shallow sandbanks.

For eastern Devon, the main river is the Exe, which rises on Exmoor and flows southwards into the Channel to the south of Exeter. The Exe is joined by the Culm, flowing off the Blackdowns, by the Clyst, from the east, and by the Barle and Creedy, from the west. As well as the Culm, a number of rivers emanate

from the Blackdowns. These include the Otter and the Axe which both flow into Lyme Bay on the south coast.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.5: Drainage pattern in the South West Peninsula, with the local study area outlined in red (The River Restoration Centre, www.therrc.co.uk)

Soils (Figure 3.6)

Soils are formed from a variety of both natural and cultural processes, but are principally derived from weathering of the underlying rock and movement and deposition by rivers. Over the millennia, human activity has also played an important part, from ploughing, to the importation of a range of materials to modify the composition and consistency of the soil. Marl, for example, a lime-rich mud, was often used as a soil conditioner to neutralise acid and to promote decomposition of organic material. In coastal districts, calcareous sand was also used to improve soil consistency and seaweed was commonly used as a fertiliser.

On the exposed granite uplands, the higher slopes are strewn with shattered rock clitter, the result of freeze-thaw under periglacial conditions, with

downslope movement of granitic sand and gravel filling in gullies and dry valleys. Thin moorland acidic wet loamy soils and peat support heather, rough grassland and, a more recent development, forestry conifer plantations. Dartmoor, in particular, has extensive areas of peaty blanket bog soils, whilst on Bodmin Moor this is more limited in extent and deep peat is restricted to basins in valley mires. The high rainfall results in leaching, leading to podsolization, and prevents decomposition of organic matter. Bodmin Moor is dryer than Dartmoor, which means that more humic soils have developed. In pockets, soils have also been influenced by burning and other agricultural activities (Stewart 2002, 18-21). On the moorland fringes of Bodmin Moor and Dartmoor there are freely draining acid loamy soils, supporting steep acid upland pastures, dry heath and moor, bracken, gorse and oak woodland, with grassland and rough grazing.

On the Culm Measures, the soil is generally heavy, wet, acidic, loamy and clayey, slowly permeable and poorly drained, of low agricultural quality and supporting seasonally wet pasture and woodland. There are also pockets of slightly acidic loamy and clayey soils with impeded drainage, particularly in the west of the Culm Measures, towards the coast. The soil supports an array of plant species, including purple moor grass and rush pasture, with pockets of wet heath, mires and fen. In the intervening lowlands of east Cornwall and west Devon, there tend to be more freely draining, slightly acid loamy soils, such as in the Tamar valley and on the Cornish Killas, the latter giving rise to brown earths, well-drained and of moderate fertility, and relatively infertile stagnogly soils and brown podzolic soils. The soils of south Devon are mainly loamy, which is reflected in a mixed farming regime, whilst in the Devon Redlands, red sandstone has produced the fertile well-drained soils that make this region the agricultural heartland of Devon.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.6: Major soil types in south west England, with the local study area outlined in red. The major soil types include 13 – brown earths & podzols, 27- stagnogley soils & rankers, 36 – argillic pelosols, stagnogley soils & brown earths, 40 – stagnogley soils, 44 – brown earths, stagnogley soils & rankers, 63 – stagnogley soils & brown podzolic soils, 64 – brown earths, 66 – stagnohumic or humic gley soils, 68 – brown earths. (Extract of map, Avery et al *1975).*

Climate (Figure 3.7)

The climate of the South West is largely governed by its position as a peninsula jutting out westwards into the Atlantic and exposed to the mild rain bearing oceanic winds. In the autumn and winter months, rainfall is predominantly from Atlantic depressions passing over or close to the British Isles, with high wind speeds almost as strong as those which batter the west coast of Scotland. In summer, solar surface heating of the land gives rise to convection currents which lead to the formation of shower clouds and thunderstorms. Levels of rainfall are also influenced by altitude, and as moisture bearing air is forced to rise up over higher ground, cloud and rain is formed as it is cooled below its

dewpoint. Therefore, whilst most coastal areas of Cornwall and Devon have rainfall of between 900-1,000 mm per year, on Bodmin Moor it is 1,500 mm and on higher Dartmoor it is 1,600 mm. In the lee of the highlands, rainfall averages are lower, with 800mm a year on average near Exeter.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.7: Rainfall in South West England, showing the distribution of mean annual rainfall across the peninsula for the period 1961-90, highlighting a close relationship between rainfall and elevation. Annual and monthly amounts of precipitation 1971-2000 plotted for selected climatological stations (after Webb, in Kain (ed) 2006). The local study area is outlined in red

Temperature likewise varies according to altitude and to proximity to the moderating influences of the sea. In the coastal areas of Cornwall and south Devon, the mean average temperatures range is from 10.5° to 12°C, whilst inland areas vary between 9.5° and 10.5°C. In a typical year, February is the coldest month in Cornwall and Devon. July and August are the warmest months in the region, with mean average temperatures in coastal parts of Cornwall of 19°C. With temperatures generally decreasing with height, however, the higher

moors tend to be colder, so that on Dartmoor, Princetown at 414m AOD has a mean annual temperature of 8°C. Variation in temperature and rainfall result in differences in the growing seasons across different parts of the region, at about 225 days on Dartmoor and Exmoor, 275 days on Bodmin Moor and the higher parts of the Culm Measures, but about 300-325 days in the lowlands (Stewart 2002, 16-17).

Current Agricultural Potential (Figure 3.8)

There are two commonly used systems of defining the agricultural potential of land based on modern agricultural methods: the Agricultural Land Classification of the Ministry of Agriculture, Fisheries and Food (1979); and Land Use Capability, formulated by the Soil Survey of England and Wales (Mackney 1979). Both systems combine a number of variables, including topography, soils and climate. Under Agricultural Land Classification there is a scale from Grade 1 (excellent quality) to Grade 5 (very poor quality). In the South West, land classified as Grade 1 is largely restricted to the Exe Valley and parts of the East Devon lowlands. There are limited areas of land classed as Grade 2 (very good), generally in the lower reaches of the major river valleys, in the Exe and Creedy valleys and of the River Dart, the lower reaches of the Tamar and its tributary rivers, in the valleys of the East and West Looe, the River Fowey and in the Camel Valley. By far the greater part of agricultural land in the region is classed as Grade 3 (good to moderate), with increasingly frequent patches of Grade 4 (poor quality) across the Culm Measures and the plateaux areas fringing the moors. Grade 5 land is mostly restricted to the uplands of Bodmin Moor, Dartmoor and Exmoor.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.8: Agricultural Land Classification, published at 1:250,000 from the provisional 1" to one-mile ALC maps, with the local study area outlined in red. The map shows grades 1-5 (Natural England 2010, ALC006).

Land Use Capability is a method of assessment of the capability of land which combines physical factors of the land, such as topography, soil and climate with known crop production and management. It essentially measures land against limitations to production and is divided into seven classes, with Class 1 being land with very minor or no physical limitations to use and Class 7, land with extremely severe limitations that cannot be rectified. Grade 2 land is found in the Creedy, Exe and Tale valleys. Grade 3 is most common in remaining lowland areas, the Blackdown Hills and the fringes of Culm Measures. Grade 4 is found in the Yarty valley on the Blackdown Hills and Grade 5 on the high uplands of Exmoor.

The two schemes show a similar picture, with the best agricultural land in the river valleys, such as the lower reaches of the Tamar, moderate quality land in much of the surrounding lowlands, and less agricultural potential across the Culm Measures. Unsurprisingly, the highlands of Bodmin Moor, Dartmoor and Exmoor have the greatest limitations in terms of arable agriculture. One must be

careful, however, not to assume that the properties of modern soils, or their distributions, necessarily directly correspond with those of an earlier era. Re-working and modification of soils, for example by the addition of fertilisers, can over time change their properties, although one constant which will always apply is the nature of the underlying geology.

The Cultural Landscape

A Sense of Landscape

Up to this point, the landscape of the South West has been described in terms of a range of physical criteria, from its underlying geology and its topography, to the rivers that cross it and the soils exploited for its agriculture. In that part of the region which is to provide the focus for this study, for example, it is possible to discern a very definite physical structure, with a central river basin, the Tamar Valley and its tributaries, framed by the highlands of Bodmin Moor and Dartmoor to the west and east, and by the plateau of the Culm Measures to the north.

If the more encompassing French definition of *pays* is to be employed, however, such *regiones* should also have a cultural and emotional unity, the inhabitants sharing a sense of community, engendered by a common cultural heritage and shared traditions. There will be a sense of identity with the landscape and a connection with locality; inhabitants sharing customs and practices, dialect and folklore. Harold Fox (1989, 57) demonstrated this particularly well in his description of the men of Dartmoor, ‘united by special privileges in common rights, [who] described less fortunate men from the rest of the shire as ‘outsiders’. A physical manifestation may perhaps be seen in what may more properly be regarded as farming regions, ‘engendered by different patterns of settlement, topography and farming type’. The views of commentators from the 16th century onwards may be used as an aid to get us closer to historic *pays*, but it should not be taken for granted that the early modern world actually reflected how people thought of themselves in the Middle Ages, or how they identified themselves with place.

Perceptions of Landscape in the 16th and 17th Centuries

On the whole, the views, beliefs and opinions of the common folk of the medieval and early modern periods have not been transmitted to us except, perhaps, by way of tales and folklore, and these often in greatly altered form. From the mid-16th century onwards, however, we begin to have written descriptions of the English countryside, albeit penned by some in the higher echelons of English society. Of these early travel writers John Leland is perhaps the most celebrated. Embarking on a series of tours of England and Wales over the period 1539-1543, his original writings are in note form only and do not constitute a continuous narrative. The exact dates of most of the 'tours' are not known, however, with the exception of that for the West Country, which can be dated to 1542. Of the elevated terrain of north Cornwall between Stratton and Padstow, he remarks that 'the contery by the North Se ys rather Hylle then Montaynes, and is very fertile of Gras and Corne' (Pearse Chope 1918, 12), whilst Bodmin Moor in a dry summer is said to be 'good for Pasturage for Catel, Wyth sum Tynnes Werke' (Pearse Chope 1918, 18). In the south-east corner of the county the 'Soile betwixt Minheneth and Natter Bridge…on Liner Ryver [is] very good, and enclosed, and metely wel woddyd' (Pearse Chope 1918, 50), revealing the enclosed nature of much of the landscape at that time. There are also some good descriptions of south Devon, where the ground is said to be 'fertile of Corne and Pasture, and [there are] sum good Wooddes between Plymtoun Thomas and Modburie' (Pearse Chope 1918, 58).

Slightly less significant is William Camden's *Britannia*, a topographical and historical survey of Great Britain and Ireland, published in Latin in 1586. The topographical information that the work contains is, admittedly, far more limited than its more detailed predecessor, although the 1607 edition included a set of English county maps. Camden (Holland 1610, 21, 22) states that the source of the Tamar is 'not farre from the northern shore, taketh his course with a swift running streame southward…now by this time spreading broader, dischargeth it selfe into the Ocean…after it hath severed Cornwal from Denshire.'

From the early 17th century there was an increasing interest amongst the 'learned' classes for county-based studies, both historical and topographical (or

chorographical), although there was often an emphasis on antiquities and on the genealogy of the local county gentry rather than on the landscape itself. For Cornwall, perhaps the most celebrated of this cadre of writers was Richard Carew, whose *The Survey of Cornwall*, was published in 1602 (Halliday 1953). Divided into two 'books', the first provides an interesting overview of the county, including information on mining, rural buildings and agricultural practices, whilst the remainder of the work is given over to short individual studies on each of the nine hundreds (divisions) of Cornwall. As a landed country gentleman, whose seat at East Antony is located in the extreme south-east corner of the county, Carew was well-acquainted with the people, history and topography of Cornwall. Although, true to type, there is a certain concentration on the history and genealogy of the landed families, particularly in the hundred-based portion of the work, Carew does provide a wealth of information on contemporary farming practices, with some general descriptive comments on the landscape. Of much of central Cornwall, for example, Carew notes 'The middle part of the shire…lieth waste and open, showing a blackish colour, beareth heath and spiry grass, and serveth in a manner only to summer cattle' (Halliday 1953, 86).

For neighbouring Devon, Tristram Risdon*'s Chorographical Description or Survey of the County of Devon* (c.1632, 1811) provides some good descriptions of the various regions of the county, also evidently from first-hand knowledge. Originally circulated in manuscript form only, Risdon seems to have been working on his treatise over the period 1605-1632, although it was not published fully until 1811. Referring to the Culm Measures, Risdon states that 'In the north and west parts the land is more lean and barren, except around towns, where the husbandman, by improvement, hath inforced fertility' (Risdon 1811, 5-6). Risdon describes Dartmoor as 'a chain of hills, consisting of blackish earth, both rocky and heathy…but in the summer the bordering neighbours bring great herds of cattle, and flocks of sheep, to pasture there' (Risdon 1811, 6).

In 1664 the Royal Society set up a Georgical Committee with the aim of compiling a series of enquiries into agriculture in the shires. Reports on only some counties, however, were completed, the volume for Devon and Cornwall

being written by Samuel Colepresse. Of the Culm Measures he notes that it is ‘a cold, weepeing, clayie ground’ (Stanes 1964).

Celia Fiennes, Daniel Defoe and the 18th Century

Two particularly notable travelogues of the period from the late 17th to early 18th centuries are those of Celia Fiennes and Daniel Defoe. Celia Fiennes’ memoir of her travels through England in a series of journeys from 1684 onwards, often riding side saddle and accompanied by one or two servants, was only intended for circulation amongst family members and was not published during her lifetime. Written largely after her travels had ended, in 1702, Robert Southey published extracts in 1812, whilst it was not until 1888 that a complete edition was published (Morris 1984). Of interest for our purposes is her itinerary of 1698, in which Fiennes describes her travels through Cornwall and Devon. On leaving Wadebridge on her way to Camelford, she climbed up on to ‘commons of black moorish ground full of sloughs’ where the ‘lanes are defended with banks wherein are stones, some great rocks, others slaty stones, such as they use for tiling’. She then visited ‘a large standing water called Dosenmere Pool in a black moorish ground, and is fed by no rivers except the little rivulets from some high hills…’ (Pearse Chope 1918, 133). Crossing into Devon, Fiennes notes ‘I should have remarked that these roads were much up and down hill through enclosed lands and woods in the same manner the other part of Cornwall and Devonshire was...’ (Pearse Chope 1918, 135).

Regarded as a classic in its descriptions of Britain in the early 18th century, Daniel Defoe’s *A Tour Through the Whole Island of Great Britain* was published in three volumes between 1724 and 1726. Best known as the author of Robinson Crusoe and of Moll Flanders, and as a political pamphleteer, this later work describes thirteen ‘circuits’ or ‘journeys’ of the country in letter form. Of the western parts of Devon, from Tavistock up to Bideford, and including the western ‘skirts’ of Dartmoor, Defoe describes the terrain as ‘consisting of a very coarse, moory, or fenny soil, very barren in its Nature; in some Places productive of nothing but a dwarf Kind of Furze, of little or no value’. Poor soil and pasture had resulted in sheep ‘which in those parts are of a small Kind, and very subject to the Rot’ (Defoe 1762, I 340). By contrast, in the South Hams and

on the east Devon coast 'most Paces are very good for Arable and Pasture, but especially for Cyder fruits' (Defoe 1762, I 341).

Between Liskeard and Launceston, Defoe observed that there were 'many tinn mines, and as they told us some of the richest veins of that metal are found there…' (Defoe 1762, I, 372). The return journey, described in letter IV, took Defoe along the north coast of Cornwall. Commenting generally on Cornwall, Defoe remarks that 'though it is fruitful enough for the supply of its own inhabitants…the waste grounds are so many, the inhabitants so numerous, and the county so narrow, that, except the herrings…they have not much overplus to furnish other parts with...' (Defoe 1762, I, 7-8). Entering Devon near Launceston, Defoe says 'As we are just entered Devonshire…it seems, at first sight, a wild, barren, poor country; but we ride but a few miles, 'till we find an alteration in several things: 1. More people; 2. Larger towns; 3. The people all busy, and in full employ upon their manufactures' (Defoe 1762, II 8-9). This part of west Devon, on the Culm Measures, is described as 'the most wild and barren part of the county.'

The 18th-century trend for writing county histories has left us many interesting works, the most memorable for the South West written by two clerics, William Borlase and Richard Polewhele. A Fellow of the Royal Society, Borlase is remembered for *The Antiquities of Cornwall* (1754) and his *Natural History of Cornwall* (1758). In the latter, he states that the 'highest grounds are covered with a black soil … it bears nothing but four grass, moss, and heath, which is cut up in thin turfs for firing… where the rains have not liberty to run off, bogs… and marshes are formed…' On the lower slopes of the hills 'this black soil serves as wintering for horned cattle…and serves as pasture for dairy and sheep, especially rearing young bullocks; but seldom turns to any account when sown with wheat.' The best soil is described as being between Padstow and the north coast and 'thence to St Germans, from which district the greatest part of this County's corn does proceed' (Borlase 1758, 59). Eastern Cornwall is generally described in more favourable terms than is the west of the county, '… and though the lowlands in Cornwall, especially along the Tamar and Alan may yield more corn than the inhabitants of those parts, and the less fruitful

hundreds of Stratton and Lysnewyth can dispense with, yet the hundreds of Poudre, Kerrier and Penwith, and the western parts of Pydre (far the most popular tracts of our county) do not yield corn near sufficient to supply the inhabitants.'

Richard Polwhele (1760-1838) was familiar with both Cornwall and Devon, born in Truro and spending time as a curate in Devon before moving to Manaccan in Cornwall. Polwhele's *The History of Devonshire* was published in three volumes between 1793 and 1806, and his *History of Cornwall* between 1803 and 1808, with a new edition in 1816. Both works contain interesting topographical information, although for Devon these are most useful for the south of the county. Of Cornwall, he notes that ''The black soil prevails in the more inland and mountainous parts of the county. It runs in a line nearly east and west through the more northern parts of the parishes of St Cleer, St Neot's, Lanlivery, Roche, and St Stephens…' (Polwhele, 1816, IV 123). More productive is 'the stiff red loam' which is 'most common on level grounds' (Polwhele, 1816, IV 123). Polewhele also states that a quarter of the county 'consists of unenclosed lands, which are appropriated to no other use, than a scanty pasturage for a miserable breed of sheep and goats throughout the year...' The typical Cornish field boundaries are described as 'consisting of about three feet of stone surmounted with turf or earth about three feet more, and exhibiting on its sides various sorts of herbaceous plants…and on its top shrubs and trees' (Polwhele 1816, IV 127).

William Marshall and the Board of Agriculture

Up to the early 19th century, both travel memoirs and topographical surveys were therefore often fairly personal accounts, with a tendency to emphasis the attributes of the wilder and more remote parts of Cornwall and Devon. As we have seen, this includes not only the larger expanses of moorland, particularly Bodmin Moor and Dartmoor, and the various commons and heaths, but also areas which today, such as the Culm Measures or the north Cornwall coast between Wadebridge and Camelford, would now be regarded as good agricultural land.

A more systematic and empirical approach is seen in the late 18th century by a new breed of writers on agriculture, the most notable of whom was William Marshall. With some experience as a farmer himself, Marshall was most interested in the study of agricultural regions, and between 1787 and 1798 produced a twelve-volume study of rural England, based on county reports by various different authors. Marshall was interested primarily in agriculture and rural economy, but his works also provide plenty of topographical information. His two volume *The Rural Economy of the West Of England* of 1796 is particularly relevant to this study. In describing the landscape of west Devon, he says of its settlements that the 'villages of West Devonshire are few and small; farm houses, and many cottages, being happily scattered over the areas of the townships. Nevertheless, near most of the churches, groups of houses occur; with here and there a hamlet' (Marshall 1796, I 24). Of perhaps relatively recent changes to the west Devon landscape, he says that this 'District has no traces of common fields. The cultivated lands are all inclosed; mostly in well sized inclosures; generally larger in proportion to the sizes of the farms…They have every appearance of having been formed from a state of common pastures…' (Marshall 1796, I 31-32). Of the more superior farmland of The South Hams, he says that '…with respect to soil, [it] ranks high among the fertile Districts of this island' (Marshall 1796, I 282). 'The entire District, some small plots excepted, is in a state of permanent inclosure; and mostly in well sized fields with straight fences'. Offering an explanation, he observes that it is likely that 'the District was inclosed from a state of common pasture' (Marshall 1796, I 287).

The discourse includes an 'excursion' into eastern Cornwall to the region around Liskeard, Bodmin and Launceston, where even on the moors, it is said, the land supports 'numerous herds of cattle, as well as many sheep' (Marshall 1796, 5). By way of contrast, the land between St Ive and Liskeard and the south coast, is described as being productive of arable crops and the 'species of soil appears to be very much like that of West Devenshire' (Marshall 1796, II 5). Of Dartmoor 'to the North of Tavistock, the skirts of Dartmore, and those of uncultivated wilds of Cornwall, may be said to unite' (Marshall 1796, II 20). The enclosed landscape also comes in for comment, as 'it may be said, that about half the lands, which fall immediately under the eye, are inclosed; the rest, in

coarse furzey Common, Capable of great improvement' (Marshall 1796, II 52). To the east, in the more fertile lands of the Vale of Exeter, this 'state of Inclosure is probably of long standing; and, from the smallness of the fields, observable in many parts of the Vale; especially round Exeter and on the eastern banks of the Estuary, it is reasonable to suppose that those parts, at least, were early inclosed' (Marshall 1796, II 108).

Marshall was an early proponent of what was eventually to become the *Board of Agriculture and Internal Improvement*, which was set up in 1793, in response to the threat to the nation's food supplies from Revolutionary France. Reports were produced for each county and submitted to the Board, although Marshall disagreed with the methods employed, which he felt to be too superficial and inordinately focussed at the level of the individual county, rather than on 'farming regions'. Of the two county reports relevant to this study, a *General View of the Agriculture of the County of Devon* (Vancouver 1808, 1813) divides that county into eight districts, six of which relate to the study area (Figure 3.9). Vancouver's District III (Moorlands) and II (Free, or Dunstone Land) correspond approximately with the Culm Measures; District IV (South Hams) to south and west Devon; and Districts V (Granite Gravel) and VIII (Dartmoor Forest) to Dartmoor. Part of District VI (Red Clay and Sandy Loams) also intrudes partly into the regional study area (Vancouver 1813, 9). The soils of District III around Holsworthy are described as 'a peaty mould resting on a fox-coloured and yellow clay' (Vancouver 1813, 32). On lower ground the soil is composed of 'a black vegetable mould, on an understratum of cold yellow clay, highly retentive of water, and in all respects resembling the parts of the rank moorlands to the northwards' (Vancouver 1813, 32-33). Of Dartmoor, the lower eastern part is described as being sheltered by the high moorland, although affected by the 'cold and frigid vapour continually descending from that eminence...' (Vancouver 1813, 10).

George Worgan's (1811;1815) equivalent treatise on Cornwall noted that the county was 'remarkable for inequality of surface…The great post roads being carried away miles together, over rugged, naked, and uncultivated heaths and moors…' (Worgan 1815, 3). The report states that, on the other hand, the

traveller may discover that in many parts ‘he will find pleasingly broken into hill and dale; some of the valleys are…richly diversified with corn, woods, coppices, orchards, running waters, and verdant meadows’. The north and south parts of the county are ‘divided by a ridge, or chain of hills’ (Worgan 1815, 6), the highest being ‘Caradon, Roughtor, Brown Willy and Hensborough.’ He arranges soils under three headings ‘1) black growan, or gravelly 2) The shelfy, or slaty 3) loams, differing in texture, colours and degree of fertility.’ The former prevails in the large tract of moor around Camelford, Bodmin, Liskeard, Launceston and Stratton, ‘some of which moors are true peat’ (Worgan 1815, 8). Where the soil is more loamy ‘it is rather adapted to the growth of barley, oats, pilez, and grass, than wheat…’ (Worgan 1815, 9). The shelfy or slaty soil is described as being the most prevalent, whilst the patches of loamy soils are ‘rich and fertile, found in low grounds, declivities, banks of rivers and townlands’ (Worgan 1815, 10). Of Bodmin Moor, he says that they were ‘stocked in the summer by large flocks of sheep and cattle, which is taken into pasture by the tenants of neighbouring farms’ (Worgan 1815,106).

The Mythical Landscape

One area in which we may gain an insight into how the landscape was perceived by the general population of the past is through the lens of myth and folklore. Many tales and stories have inevitably become attached to the more wild and untamed places of the South West. Moors were typically regarded as wild and dangerous places, inhabited by supernatural beings, ghosts, demons and other spirits, and Dartmoor, for example, is claimed to have the highest concentration of supernatural beings in the South West (Franklin 2006, 152). Notoriously, the Devil was said to have visited the village of Widecombe-in-the-Moor during the great thunderstorm of 1638, to collect the soul of Jan Reynolds after his Mephistophelian pact with the Devil (Dymond 1876). Franklin (2006, 152) has also pointed to a particular association with prehistoric monuments, such as barrows and stone circles, which survive in greater numbers on uncultivated moorlands, such as the West Penwith coast, Bodmin Moor, Dartmoor and Exmoor.

Perhaps most famous of all, however, is the semi-mythical Jan Tregeagle, in life perhaps a Bodmin magistrate of the early 17th century, who was immortalised in many legends in various settings across Cornwall, his spirit heard howling in the wind when storms swept in off the Atlantic. There is a particular association with Bodmin Moor, where Tregeagle is bound until Judgement Day to empty the reputedly bottomless Dozmary Pool with a leaky limpet shell. St Leger-Gordon (1950, 272) suggested that the supernatural more often did not manifest itself in concrete form, but that in the west country 'country people fear the powers of darkness generally more than any identifiable apparition'.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.9: Vancouver's eight 'districts' as published in General View of the Agriculture of the County of Devon *(1808, 1813, opposite title page).*

The Identification of Pays

This chapter has sought to investigate the South West Peninsula using a range of both physical criteria and historical descriptive accounts of landscape and agriculture, in order to gain a sense of the historic landscape. A number of schemes have previously been devised which have separated the landscape of Devon into sub-regions, for example Vancouver's eight 'districts', although this was based primarily on soil type (Figure 3.9). *The Domesday Geography of South-West England* (Darby and Finn 1967, 290-294 and Figure 3.10) also provides regional subdivisions of Devon, and although broadly similar to Vancouver's 'districts' both the Culm Measures and Dartmoor are, however, seen as discrete entities rather than being divided by soil type into smaller regions (Figure 3.10). In the same volume, Cornwall did not lend itself so easily to neat subdivisions, other than a distinction between the lowlands and the highland moors (Darby and Finn 1967, 342-34).

It will be remembered that *pays* can be a difficult concept to define. As noted in the introduction, in the French usage of the term, it will typically mean farming regions and include a complex mixture of aspects of the landscape, settlement form, farming practices, 'ways of doing things' and even local speech patterns and idioms. In contrasting east Devon with west Somerset and Dorset, Rippon (2012) also looked at vernacular architecture, choosing one particular aspect – position of the chimney within a building – as a cultural marker. The approach taken in this study is to restrict the term to mean the physical landscape, so that settlement and field system distribution patterns can later be overlain on the physical backdrop of the landscape.

A point should also be made about the non-selection of certain aspects of the historic landscape that could also be potentially of interest, over and above settlement form and distribution and the distribution of former open field. Rippon's analysis of vernacular architecture in the South West was essentially of post-medieval building forms. As was illustrated in Chapter 2, there was

actually greater uniformity of building form across the region in the medieval period. This also applies to the form of field boundaries, with the great Cornish and Devon hedgebanks found right across the two counties (see Chapter 2).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 3.10: Finn's Devonshire Regions, showing regional subdivisions. Boroughs are indicated by initials: B, Barnstaple; E, Exeter; L, Lydford; O, Okehampton; T, Totnes. (From Darby and Finn 1967, Fig.66, 291).

Using the foregoing, therefore, it is possible to define a small number of relatively large *pays* in the eastern part of the peninsula, with greater fragmentation in Cornwall to the west. For the purposes of this study, *pays* have been defined largely in terms of the physical landscape but also with reference to earlier post-medieval descriptions of agricultural practice.

The *pays* identified were: Penwith; Lizard and Meneage; Central-West Cornwall; Roseland; Bodmin Moor and North Cornwall Coast; South-East Cornwall / South-West Devon; Culm Measures; Dartmoor; Taw / Torridge Lowlands; Exmoor; South Hams; East Devon Lowlands; Blackdown Hills; and Quantocks.

Descriptions are given below for those of direct relevance to the local study area. These are illustrated in Figure 3.11.

Bodmin Moor & the North Cornwall Coastal Plateau consists of a high moorland landscape of granite with thin, poorly drained acid soils, grass and heather, and areas of blanket bog. The climate is generally colder and wetter than in the surrounding lowlands, with many rivers radiating out from it, some deeply incised into the landscape, with wet deciduous woodland on the lower slopes. Traditionally used for grazing, some parts have been used for arable cultivation in the past, although the growing season is shorter than in the surrounding lowlands. The moors have generally been fairly thinly populated, although sometimes greater than would otherwise be expected because of the extent of mining activity. Otherwise, the moor has been seen as wild and remote, which has given rise to many stories of the supernatural.

South-East Cornwall, South-West Devon & the Middle and Lower Tamar Valley comprise the lowlands of Cornwall to the south and east of Bodmin Moor and the lower lying parts of south-west Devon, from the western foothills of Dartmoor westwards. The area includes the middle and lower reaches of the Tamar Valley, from approximately Launceston southwards, and the network of tributary valleys draining off the adjacent high moorlands, including the Inny, the Lynher, the Lyd and the Tavy. A lower-lying landscape with generally better drained and more fertile loamy soils than the surrounding uplands, the region is characterised by a mixed farming regime of both pasture and arable fields enclosed by Cornish and Devon Hedges. At the centre of the region is the Tamar Valley itself which, in its middle reaches, follows a narrow winding course before opening out to the south of Calstock to form a long, wide estuary. Although approximately forming the political boundary between Cornwall and

Devon, in more recent centuries the river was an important highway for shipping, both for the export of the region's mineral wealth and for its agricultural produce. From the 19th century, the valley was known for its market gardens, which gained in importance with the coming of the railways (Lewis 2004).

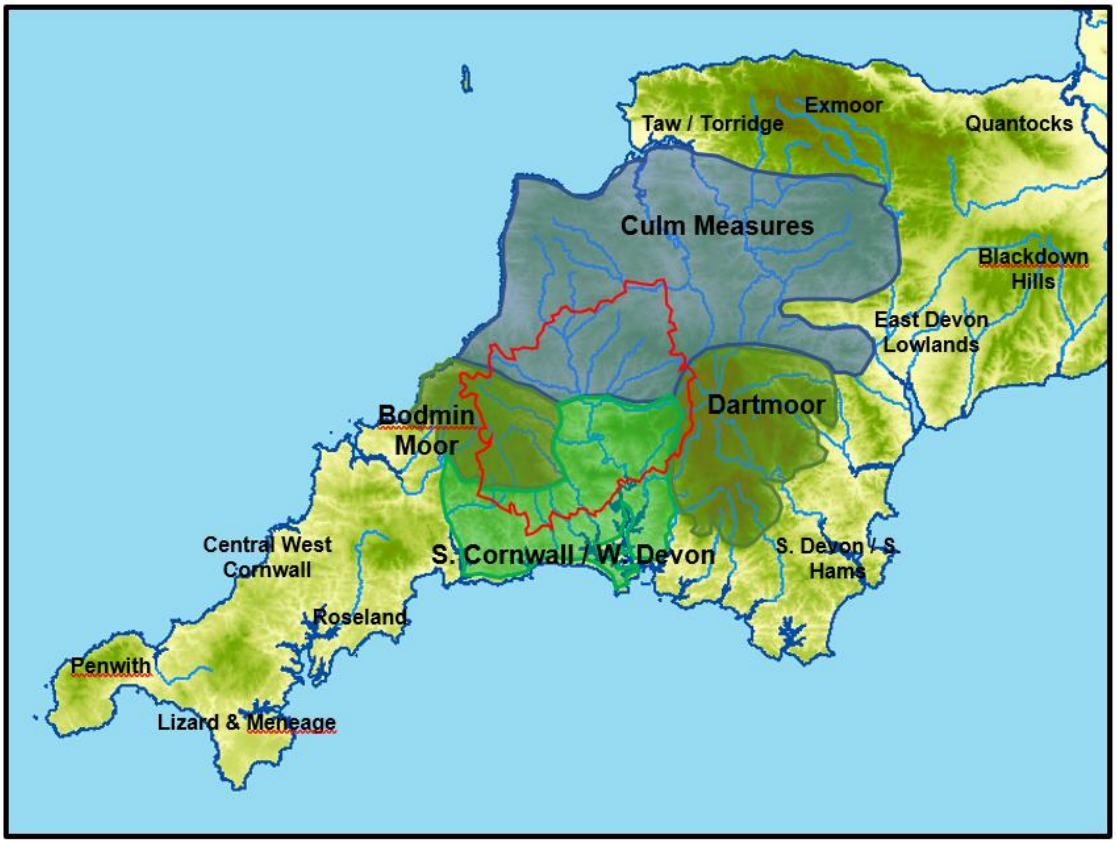


Figure 3.11: The pays of the South West Peninsula, with those identified as having most direct relevance to the local study area shaded, and with the local study area outlined in red.

The Culm Measures lie across north-east Cornwall and north and west Devon, and frame the northern part of the regional study area, a rolling plateau of mainly slates and shales, with poorly drained grassland, fairly high levels of rainfall and a dispersed population. The plateau is dissected by a number of river valleys which typically have more fertile soils, although on the whole the region has been regarded as having poor agricultural land, generally used for pasture or for more hardy crops such as oats. Within this area, Broadbury Ridges is a highland area extending westwards from the north-western edge of Dartmoor and dissected by river valley slopes and Combes.

Dartmoor is a much larger upland granite moor, higher than Bodmin Moor with moderately higher rainfall. With noticeably higher rainfall than in the surrounding areas, as with Bodmin Moor there is a radiating pattern of rivers draining into the surrounding lowlands. Soils are similarly thin, acidic and poorly drained, with western Dartmoor used mainly for pasture, of sheep with transhumance of cattle common in the past, and with a low, dispersed settlement pattern. The north-eastern side of the moor is farmed to a greater degree and the population is higher. As with Bodmin Moor, and probably to a greater extent because of its larger size, Dartmoor is seen as a wild, inhospitable place.

Discussion

There has been some discussion over the precise concept of *pays*, as in one sense they may be seen as 'natural regions', defined at a fundamental level by topography, geology, soils and ecology (Everitt 1979), but at another they may be viewed in terms of the social and economic characteristics which make them distinctive (Phythian-Adams 1987; 1993). It is with the former, however, that this exercise has been most concerned, to provide a backdrop upon which an examination of settlement and field patterns may be compared.

4

Sources and Methodology

Introduction

This thesis examines local and regional variation in the historic landscape of the South West Peninsula. In order to do so, a nested approach was taken, with Cornwall and Devon in their entirety forming a regional study area, within which a more focussed local study area was examined in more detail. As will be seen, the latter comprises a transect of seventy-one ecclesiastical parishes spanning the modern border between the two counties, which largely follows the course of the River Tamar.

The chapter is divided into three sections. The first part describes the local study area and in particular the rationale behind choosing and defining its limits. The next section provides a summary of the sources used for this study. These include a range of historic map sources, particularly the earliest and most comprehensive mapping available for England, which are the First Edition Six Inch to One Mile Ordnance Survey maps (1:10,560) of the 1880s/90s and the First Edition Twenty-Five Inch to One Mile OS maps (1:2500) of the same period. To this was added a range of other sources of data available from the historic environment records of Cornwall and Devon County councils, and also from field observations. The former includes archaeological and field surveys as well as data collected from aerial photographs, particularly those undertaken by the RAF in the years after the Second World War. Also included was a range of documentary sources, place-name studies and a small number of targeted landscape studies which have previously been undertaken of the region. More recently, LiDAR scans, aerial laser surveys of landscape topography, have become readily available, and this has great potential to add to our

understanding of the historic landscape by revealing or enhancing earthwork features otherwise not visible.

The final section of this chapter describes the methodologies employed in undertaking the research. Analysis was undertaken using a Geographic Information System (GIS), in which the 19th-century OS data was used as the basis, upon which 19th-century ecclesiastical parish boundaries were added. It was therefore possible to overlay further layers of data, for example contour information and rivers, as well as archaeological resources derived from the respective HERs of both Cornwall and Devon. From this, it was then possible to create distribution maps and interpretative diagrams to aid in the analysis of settlement and field system patterns.

Study Area

Of interest to this thesis is the identification of variation in the historic landscape between Cornwall on the one hand, often regarded as a 'Celtic' country, and 'English' Devon, on the other. The two counties therefore form the regional study area for this thesis. Aspects such as geology, topography, soils and climate will be looked at from the scale of the South West Peninsula as a whole. In order to better understand the region, however, a more targeted local study area was then chosen. A number of recent landscape studies of the South West have used ecclesiastical parishes as the basis of their analysis (Rippon 2012; Sandover 2012; Ryder 2013); they being the earliest, most comprehensive form of political structure in the English landscape. Ecclesiastical parishes also survived in substantially the same form through to the 19th century, when there was a rearrangement / consolidation to create civil parishes, at which point they became the lowest tier of local government.

Table 4.1: Cornish parishes included within the local study area, indicating hundred and extent in acres in the 1840s, at time of tithe apportionment.

Cornish Parishes			
Parish	**Hundred**	**Area in Acres**	**Comment**
North Tamerton	Stratton/Trigg M.	5,339	Portion to East of River Tamar.
Boyton	Stratton/Trigg M.	4,943	Formerly Devon; Northcott in Devon.
Warbstow	Lesnewth/Trigg M.	3,729	Detached portion.
Treneglos	Lesnewth/Trigg M.	2,729	Sub-parish of Warbstow.
Tremaine	East Wivelshire	1,501	Sub-parish of Egloskerry.
Tresmeer	East Wivelshire	1,309	
North Petherwin	Black Torrington	7,981	Formerly Devon.
Werrington	Black Torrington	5,356	Formerly Devon; chapelry of North Petherwin; portion to east of Tamar incorporated into St Giles-on-the-Heath.
Davidstow	Lesnewth/Trigg M.	6,875	
St Clether	Lesnewth/Trigg M.	2,978	
Laneast	East Wivelshire	2,559	Chapel of St Stephen, Launceston.
Trewen	East Wivelshire	993	
Egloskerry	East Wivelshire	3,236	
St Stephen	East Wivelshire	3,937	
St Thomas the Apostle	East Wivelshire	2,092	Tregadillett, chapel of St Stephen.
St Mary Magdalen	East Wivelshire	1,151	Originally chantry chapel of St Stephen.
Lawhitton	East Wivelshire	2,653	Bishop's Peculiar.
Altarnun	Lesnewth/Trigg M.	14,875	
Lewannick	East Wivelshire	3,807	
South Petherwin	East Wivelshire	4,981	Small shared portion with Lezant; Bishop's Peculiar.
Lezant	East Wivelshire	4,755	Small shared portion with South Petherwin; Bishop's Peculiar.
St Neot	West Wivelshire	14,258	
St Cleer	West Wivelshire	11,317	
North Hill	East Wivelshire	7,273	
Linkinhorne	East Wivelshire	7,919	
Stoke Climsland	East Wivelshire	8,792	
St Ive	East Wivelshire	6,083	
South Hill	East Wivelshire	3,425	
Callington	East Wivelshire	2,573	Chapel of ease of South Hill.
Calstock	East Wivelshire	5,794	
Liskeard	West Wivelshire	8,628	Town and rural.
Menheniot	East Wivelshire	7,030	
Quethiock	East Wivelshire	4,544	
St Mellion	East Wivelshire	3,003	
St Dominick	East Wivelshire	3,147	
Pillaton	East Wivelshire	2,407	

Table 4.2: Devon parishes included within the local study area, indicating hundred and extent in acres in the 1840s, at time of tithe apportionment.

Devon Parishes			
Parish	**Hundred**	**Area in Acres**	**Comment**
Black Torrington	Black Torrington	6,650	Detached portions: 1) Totleigh, E & W Totleigh (Highampton); 2) Middlecott (Bradford).
Highampton	Black Torrington	3,326	
Clawton	Black Torrington	5,224	
Tetcott	Black Torrington	2,162	Detached portion in Luffincott, around Eastpeek.
Luffincott	Black Torrington	993	
St Giles-on-the-Heath	Black Torrington	3,175	Chapelry of North Petherwin, then after 1288 of St Stephen.
Ashwater	Black Torrington	8,658	
Virginstow	Lifton	1,326	
Broadwoodwidger	Lifton	8,667	
Halwill	Black Torrington	3,462	
Beaworthy	Black Torrington	3,820	
Northlew	Black Torrington	7,076	
Germansweek	Lifton	2,631	
Bratton Clovelly	Lifton	8,444	Detached portion in Broadwoodwidger.
Ashbury	Black Torrington	1,741	
Thrushelton	Lifton	3,787	
Bridestowe	Lifton	5,925	Common land held with Sourton.
Sourton	Lifton	5,039	Common land held with Bridesowe.
Bridestowe & Sourton Common	Lifton	2,246	Dartmoor fringe.
Lifton	Lifton	6,104	Detached portion in Broadwoodwidger.
Stowford	Lifton	2,120	
Bradstone	Lifton	1,262	
Kelly	Lifton	1,779	
Dunterton	Lifton	1,190	
Marystow	Lifton	2,931	
Lewtrenchard	Lifton	2,838	Detached portion in Thrushelton, around Orchard, Kilson & Wortham.
Coryton	Lifton	1,366	
Lydford	Lifton	2,096	Dartmoor Forest not included.
Brentor	Tavistock/Lifton	1,222	
Milton Abbot	Tavistock/Lifton	6,670	
Sydenham Damerel	Lifton	1,400	
Lamerton	Lifton	7,389	Detached portion comprising N & S Brentor.
Mary Tavy	Lifton	4,231	
Peter Tavy	Roborough	9,429	Detached portion in Whitchurch, around Sortridge.
Tavistock	Tavistock/Lifton	11,678	Detached portion in Peter Tavy, around Cudlipptown; parish of Gulworthy created from Tavistock in 1858.
Whitchurch	Roborough	6,000	

The next issue to address was whether sample areas should be taken from across the regional study area or if the aim of the study would be best served by settling on a single, continuous transect of parishes. Sandover (2012) chose to investigate four pairs of parishes from across Devon in his study of the Domesday and later medieval landscape; and Ryder (2013) also took three samples of parishes from across Devon, the Blackdown Hills, Hartland and the South Hams. Taking such a scattered sample approach, however, can potentially hamper understanding of the broader landscape. Rippon (2012) took a different approach, choosing a transect of approximately one hundred parishes spanning a 'border' region between two landscape zones, centred on the Blackdown Hills between Devon on the one hand, and Somerset and part of Dorset on the other. This approach allowed for the examination of territory either side of a frontier between two hypothesised landscape zones, in that case between the Central and Western Zones. The study also took in a range of landscape types, from the heights of the Blackdown Hills to the lowland agricultural landscapes to either side. Of those studies referred to, it is the latter which most closely matches the aims of this study, which also seeks to examine landscape character either side of a longstanding political and cultural boundary. Adopting a local study area based on a transect of ecclesiastical parishes spanning east Cornwall and west Devon was therefore deemed to be potentially the most productive approach.

An important part of this study has been to assess the extent to which aspects of the physical environment have determined the formation of the historic landscape of the South West. The local study area would therefore need to be of a sufficient size to take in a range of landscape types, based on the *pays* identified in Chapter 3. The axis of the local study area would inevitably be the River Tamar, as the current and also largely historic political boundary between Cornwall and Devon. It would need to extend far enough westwards and eastwards from the Tamar to take in both the relatively fertile agricultural lowlands to either side of the river as well as parts of both Bodmin Moor and Dartmoor. The two moors have often been regarded as marginal landscapes, although this has not always been the case. In the past they have been used for pasture and for other economic activities, such as tin streaming and turf cutting and, on occasion, have even been brought into use for arable cultivation. It was

also thought important to include part of the Culm Measures, that area of relatively high ground covering parts of north-east Cornwall and west Devon, which in recent years has been dominated by livestock farming. Here, the soils tend to be of more intractable clay and the region subject to higher rainfall. There was also a conscious decision to position the local study area so as to avoid coastal districts, where a number of important port towns, such as East Looe, grew to prominence in the later Middle Ages (Fox 2001). It was felt that including coastal parishes could potentially skew the results of a study which was otherwise focussed on the rural landscape.

The local study area would need to be of a manageable size to allow the proper examination of settlement patterns and field systems. Approximately one hundred parishes in a transect through east Cornwall and west Devon were provisionally marked out. It soon became clear, however, that some of the eastern parishes were a little too far into central Devon to comfortably sit within a study area focusing on the Tamar Valley, as well as taking in too great an area of Bodmin Moor and of Dartmoor. The western and eastern limits of the local study area were therefore moved closer to the river. There was also the question of how many major towns would be included and moving the eastern boundary in would remove Okehampton from the study, whilst Plymouth, now the largest city in Cornwall and Devon, was also excluded as being too large an urban centre. The slightly reduced study area decided upon consisted of seventy-one ecclesiastical parishes, with approximately equal numbers either side of the River Tamar. The total size of the local study area is 1,370 sq km (529 sq miles). In terms of the medieval hundreds, the local study area takes in parts of East and West Wivelshire and Trigg, on the Cornish side of the Tamar, and Torrington, Lifton and Roborough, on the Devon side, with the later hundred of Tavistock subsequently formed from parts of Roborough and Lifton.

The parishes which go to make up the local study area are listed in Tables 4.1 and 4.2. As will become apparent, historically there has not been a simple division between Cornish and Devon parishes. The border between the two counties has not remained static over time and has not always strictly adhered to the line of the River Tamar. The three Cornish parishes of North Petherwin,

Boyton and Werrington, to the north of Launceston, for example, lie mainly to the west of the river but were, until the local government reorganisation of 1974, part of the county of Devon. In addition, although most of the parish of Werrington lay to the west of the Tamar, a portion did lie on the east bank. Part of Boyton also lay to the east of the Tamar, later becoming a separate Devon parish under the name of Northcott.

Figure 4.1: Plan of the Local Study Area (outlined in red) showing the seventy-one ecclesiastical parishes, outlined in black. The positions of the towns are indicated as blue dots: LN – Launceston (St Mary Magdalene); LK – Liskeard; CA – Callington; TA - Tavistock (From ArcMap using Kain and Oliver 2001)

Parishes were not always discrete territorial entities, many having detached parcels of land located within other parishes, betraying complicated patterns of

former land ownership. For example, some parishes were created from parts of once lager parishes, their churches often starting life as chapelries of the parish church upon which they depended. Therefore, Warbstow was once a chapelry of Treneglos, subsequently becoming a separate parish (Orme 2007, 32-3). To Lydford was attached the central part of Dartmoor, often termed the Dartmoor Forest, but which in reality was only a royal forest for a short period of time (Fox 2012, 27). Lacking settlement, and serving as an administration unit only, this area has been excluded from the analysis.

In terms of the local study area, the issue of detached parcels would also seem to be something that was more common with Devon parishes than with those in Cornwall. Most parishes were subsequently rationalised with the reorganisation into civil parishes in the late 19th century, the Local Government Act of 1894 allowing for the tidying up of boundaries so that the parishes of today form coherent administrative units. This also involved the creation of some new parishes. Northcott has already been referred to (Hoskins 1954, 445), whilst Gulworthy was constituted as a civil parish from the south-west portion of Tavistock. A parcel of land on the north-western edge of Dartmoor was also shared as common heath between the parishes of Sourton and Bridestowe. For the purposes of this study, comprehensive coverage of English ecclesiastical parishes is based on the ecclesiastical parish boundaries compiled from the Tithe Surveys of the 1840s and obtained from Kain and Oliver's (2001) *The Historic Parishes in England and Wales*, available as a digital file.

Sources

Mapping

A key resource for this thesis is the corpus of readily available late 19th-century OS maps. A range of other historic maps were, however, consulted where they were thought to add something to the interpretation of the study. There are a number of early general maps of the South West, for example John Speed's *The Theatre and Empire of Great Britain* (Figure 4.2). Early maps of Cornwall include those of Saxton (1579), Norden (c.1584), Gascoyne (1699) and Martyn

(1748). For Devon, there is Donn's map of 1765 and Greenwood's map of 1827. All of these maps are at a small scale, however, and their use in this study illustrative but fairly limited.

Where they exist, estate maps can be much more detailed though are of variable quality, specific to particular estates, and are generally more difficult to obtain. For the South West, the best known, and most accessible, is the Lanhydrock Atlas, whose estates covered much of Cornwall. The atlas is now fully published by the National Trust (Holden *et al* 2010). This work comprises a series of hand-coloured maps of various settlements, with individual fields and buildings marked. It offers a wealth of information on field systems and has been used extensively to identify the presence of former open field, but is restricted to manors belonging to the estate. Examples of other estate maps include those of Cothele (1731) and Harewood (1784), in Calstock parish.

Of use across much of England have been parliamentary enclosure maps, though most former open field was actually enclosed by agreement in the South West rather than by Act of Parliament (Yelling 1977, 27). They are therefore not very common for holdings in the local study area. Where they do exist, awards involved the enclosure of common land and were recorded in a detailed document known as an Inclosure Award. This will have a list of recipients of allotments and any sales or exchanges of land. In Calstock, the Inclosure award was in 1862, mid-way between the tithe map in 1839 and the First Edition Six Inch to One Mile OS map of 1889 (Wainwright *et al* 2012, 9).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 4.2: Map of Cornwall, from Speed's Britannia, 1610 (Quixley 2018, Plate 11, 32)

Of much more use are tithe maps, compiled after the Tithe Commutation Act of 1836. The process was designed to substitute parish tithes for money payments. Tithe apportionments were carried out between 1836 and 1855, with most complete by 1845 (Kain 1979, 226). Accurate maps were drawn up of each parish (their accuracy had to be verified) along with lists of owners and occupiers of each parcel of land, as well as a description of the land, sometimes including the names of individual fields. These were lodged with the Tithe Commission, with copies of the maps and apportionments held by both parish and diocese. A number of recent targeted studies in the South West have used this detailed information to look at land ownership and occupancy and then to analyse the data using GIS (Rippon 2007; 2012; Sandover 2012; Ryder 2013). For Devon, tithe maps are now available on-line through the Devon County Council On-line Environment Viewer but were not so readily accessible when the majority of this part of the study was undertaken. For this reason, use of tithe maps in this thesis has been limited to a survey of a small number of selected parishes from which broader conclusions could be drawn (Chapter 10).

As will be seen, this brief survey produced some fairly consistent results, in line with those studies referred to above, and it is considered that little would have been gained were a more detailed study to have been undertaken.

In terms of comprehensive OS mapping coverage of the South West, there are the First Edition One Inch to One Mile OS maps, published in 1809 for Devon and in 1813 for Cornwall (1:63,360). The earliest most comprehensive detailed mapping of the region, however, is contained in the First Edition Six Inch to One Mile Ordnance Survey maps (1:10,560), mostly compiled in the 1880s and 1890s. These are of a consistent quality across the entire local study area and predate most of the industrial-type changes to the English countryside that were to take place from the late 19th century onwards. With their accuracy and depiction of detail these were to form the basis of this study. There was also extensive cross-referencing with the larger scale Twenty-Five Inch to One Mile County Series (1:2500) maps, which provide even greater detail, right down to the level of individual buildings. Both sets of maps were available to use under licence digitally through Edina Digimap (University of Exeter acting as sub-licensee). For the Cornish part of the study area the six-inch maps are dated 1887-89, while for Devon they cover the period 1887-91. There are some gaps in the digital data which have been filled by the First Revision maps of 1906-07, also available through Digimap. For the larger scale Twenty-five Inch to One Mile maps the Cornish series were produced in 1882-4 and those for Devon in 1882-5.

Historic Environment Records (HER)

The Historic Environment Records for both Cornwall and Devon are now both readily available through on-line GIS mapping facilities (Cornwall Council Interactive Map; Devon Environment Viewer). These both use modern OS base mapping and allow for the turning on of various layers of data, for example for listed buildings or ancient monuments.

At the commencement of this project, the Cornwall Council version was much more comprehensive and user-friendly than its Devon counterpart. Therefore, with the former it was possible to select both point and line data on the map, for

example showing finds sites, as well as linear features such as banks or ditches. This was particularly useful in identifying, for example, former building plots and lost field boundaries. Clicking on the feature on the map provides a basic explanation and a link to an entry in the relevant website, for example Heritage Gateway or Listed Buildings Register. There was also inclusion of detailed mapping evidence derived from aerial photographs, studied as part of the National Mapping Programme (see next section).

The Devon interactive viewer was in a much more basic format at the commencement this study, but a number of packages have since been added and it is now on a par with that for Cornwall. The format and structure are a little different to that for Cornwall, but there are some useful additional facilities. Therefore, a recent useful addition has been the inclusion of tithe maps, which have now been digitised and overlaid on the modern OS mapping.

National Mapping Programme (NMP) / Aerial Investigation and Mapping, and Aerial Photographs

The National Mapping Programme was designed to identify archaeological features and monuments through the analysis of collections of aerial photographs across the UK. Initiated by the Royal Commission on the Historical Monuments of England (RCHME) in 1992, this was to be a synthesis of all archaeological features visible in aerial photographs held in a number of collections.

For Cornwall and the Isles of Scilly, this involved a 12-year programme from 1994-2006, undertaken by the then Cornwall County Council Historic Environment Service, drawing on collections of aerial photographs from three main collections, held at the National Monuments Record Centre, Cornwall County Council (now Cornwall Council) and Cambridge University. Two of the biggest collections of photographs were those taken by the RAF between 1942 and 1964, and by the Ordnance Survey between 1961 and 1989. The results of the analysis are now available digitally through the Cornwall Council Interactive Viewer, and it was therefore possible to interrogate this information directly, to identify evidence of lost field boundaries, building plots and other archaeological

features. Under Historic England this is now referred to as Aerial Investigation and Mapping (AI&M).

At the stage in this study in which settlement and field systems were being investigated, coverage of Devon was patchy but a programme of analysis by Devon Historic Environment Service was ongoing. Pilot studies had been undertaken of the Blackdown Hills AONB; East and Mid Devon River Catchment; North Devon Coast AONB; Dartmoor; Exmoor; and North Devon, with a new project covering the area between Haldon Ridge and the Dart Valley just commencing. Of relevance to this study was the North Devon Mapping Project (2007). This actually comprised four transects, the West Transect lying within the Devon part of the local study area, aligned north–south and running from just east of Holsworthy down to east of Launceston.

In order to redress this imbalance, it was therefore felt necessary to examine some of the source material for Devon, and in particular the collection of RAF aerial photographs taken in 1947-48. Taken over the winter of those years and at high level, shadows may pick out earthworks around existing settlements which may point to building platforms or lost field boundaries. Aircraft with cameras fixed on each wing flew in transects across the countryside, taking a series of overlapping photographs. When partially overlaid and viewed through a stereoscope, the photographs provide a 3D image which can bring into relief low earthworks which are otherwise difficult to identify on the ground. Visits were made to the Devon Records Office in Exeter in June 2015 and then an assessment was made of the extent of the photographic record held for the Devon part of the local study area. Photographs taken of selected transects were then examined through a stereoscopic viewer to try to locate any such features, although none were actually found during the course of this exercise. Subsequently, the imbalance between Devon and Cornwall HERs has largely been addressed, with much more information for the Devon part of the NMP now available on the Devon Environment Viewer.

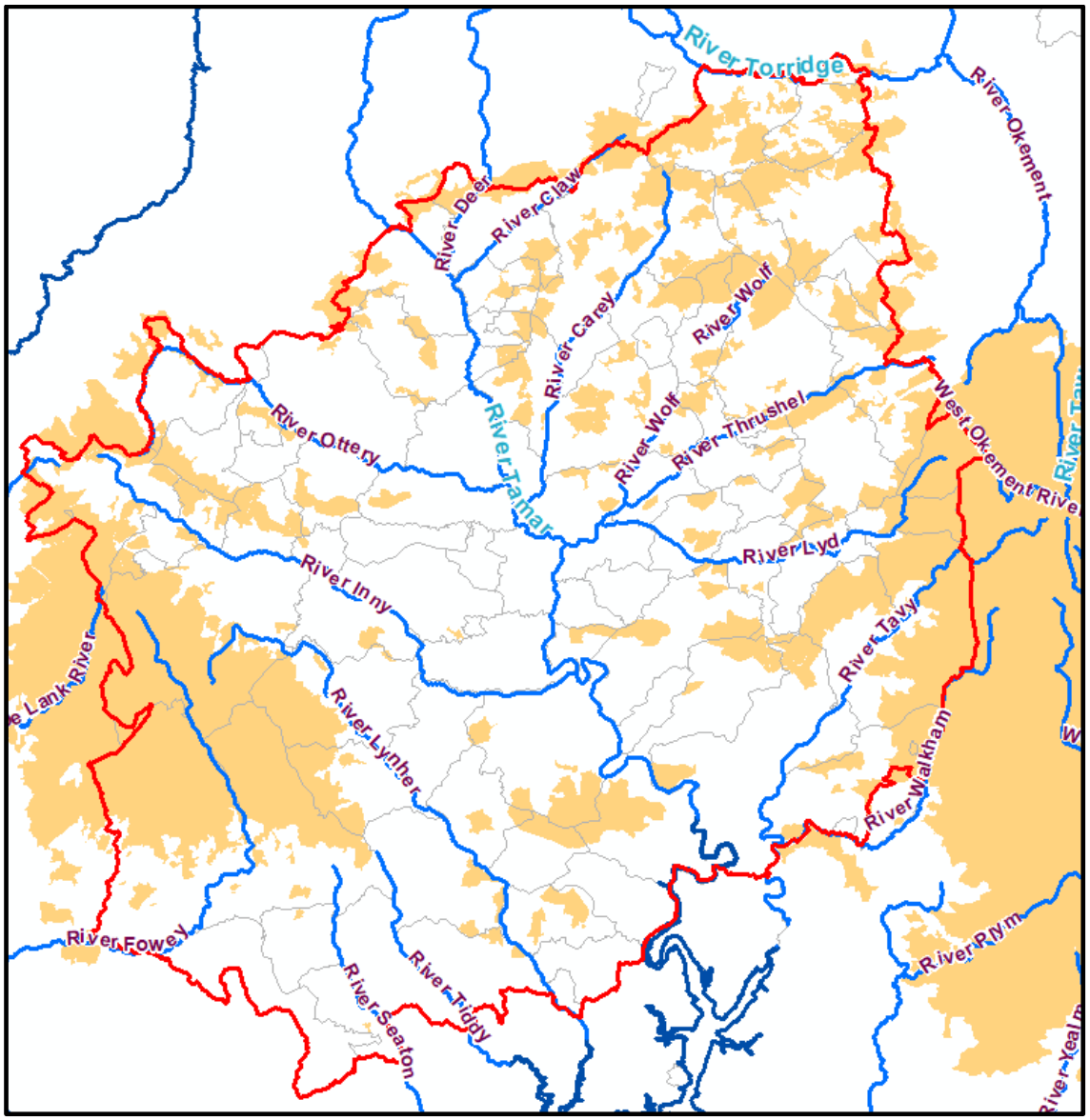


Figure 4.3: Map showing the main rivers within the local study area (ArcMap extract)

LiDAR

LiDAR (light imaging, detection, and ranging) is a more recent development, and for England has involved aerial-based topographic surveys of much of the country, at different resolutions. These are undertaken using a mixture of laser and light imaging. LiDAR scans only became available after the main stages of analysis for this study had been undertaken, and therefore only some limited use of it was made. This was particularly the case with reference to identifying lost field boundaries, as described in Chapter 10. For this thesis, use was made of Environment Agency data, available through the website Lidarfinder.com (https://www.lidarfinder.com/). This is in the format DTM (Digital Terrain Model)

and DSM (Digital Surface Model), both with approximately 60% coverage of England at 1m spatial resolution. The former provides the best detail for the purposes of this study. Images of the entire local study area were viewed, although, in this case, no new targets were identified.

Historic Landscape Characterisation (HLC)

Historic Landscape Characterisation (HLC) is a GIS system of mapping historic land use patterns, developed primarily as a tool for managing the landscape and to inform on its conservation (Herring 1998). HLCs divide up the landscape into its constituent parts, which are represented by polygons, assigning them spatially to predetermined categories, such as enclosed land or woodland. They are used to define a number of landscape character types from which are created broader 'character zones'. Information can then be added to each polygon (shape data) to further aid in analysis, for example, whether the former is by parliamentary enclosure or piecemeal assarting of woodland. Promoted by English Heritage, the method was developed in the 1990s, with a pilot undertaken in Cornwall in 1993 by the Cornwall Archaeological Unit, initially of Bodmin Moor in 1993. This was subsequently widened to cover the whole of Cornwall (Herring 1998) and HLCs have now been set up in each county in England.

The technique is not without its problems, not least of which is the variability between counties in how HLCs have been put together (Rippon 2007, 242-3). Being county based, there has inevitably been some variability in the way in which HLCs have been constructed, notably in the number and definition of land use units with, for example, seventeen landscape types defined in Cornwall and eighty-five in Hampshire. It is therefore difficult to directly compare counties which has led to criticism that its research potential is thereby lessened.

There is a growing acknowledgement, however, that historic landscape characterisation (as a concept rather than formal HLCs adopted by county councils) may be used as a powerful research tool if constructed in the right way (Rippon 2007, 3-4). HLCs generally use modern OS maps as a base, as befits their primary role in informing planners within county councils. This is an

example of what Tom Bloemers (2002) has termed future-oriented archaeology. Researchers on the other hand are more often interested in the reconstruction and development of past landscapes and in these circumstances it is best to use the oldest large-scale mapping available, which in most cases are the 19th-century OS maps (Rippon 2007). Over reliance on morphological aspects of the landscape, however, particularly field boundary patterns, even if based on 19th-century cartographic evidence, can lead to a failure to appreciate that the landscape is an ever changing, dynamic entity. Where historic landscape characterisation can be used as a powerful research tool is where they take a more interdisciplinary approach, integrating morphological information with other 'layers' of data, such as adding information from archaeological survey and excavation.

For analytical purposes, there are also problems in using county HLCs that categorise every element of the landscape. This study has much more targeted objectives, and aims to characterise the historic landscape of Cornwall and Devon by looking at certain, specific aspects of the landscape – rural settlement and open fields. It is not a traditional Historic Landscape Characterisation (HLC) in the sense employed, for example, by county council planning departments. In this section, a distinction will be drawn between the concept of historic landscape characterisation (as a research tool) and the more formal HLCs (which will be capitalised in the text to make a clear distinction between the two), created by county councils for use by planners.

Reference has also been made to a number of previous research projects which happen to fall within the local study area. An historic landscape analysis was undertaken of Calstock parish for the Tamar Valley AONB (Rouse 2012; Wainwright *et al* 2012). Also incidental to a study of the royal silver mines of Bere Ferrers (Rippon *et al* 2009), a landscape assessment was undertaken of that parish as a whole, including the town of Bere Alston and surrounding field systems. Touching the eastern part of the South West, Rippon (2012) has looked in detail at a transect through the Blackdown Hills, covering east Devon and west Somerset and a part of Dorset, defining local landscape character by integrating the study of maps with the character and distribution of standing

buildings, the language of landscape (field and place-names), as well as the position of churches within the landscape.

Documentary Sources

Whilst it is beyond the scope of this study to examine primary historical records, there are a small number of useful social and economic studies which are of direct relevance to the local study area. Although somewhat dated, perhaps the most relevant of these is Finberg's (1951; 1969a) economic study of Tavistock Abbey, which covers the period from the foundation of the abbey in the late 10th century to its dissolution in 1539. The town and parish of Tavistock lie within the local study area, as do many of its key estates, including the core parishes of Lamerton, Milton Abbot and Werrington.

Two works of relevance to Cornwall are Hatcher's (1970a) study of the Duchy of Cornwall and Fox and Padel's (2000) study of the lands of the Arundell family of Lanherne. The first of these covers the period 1300-1500 and therefore does not have the same extended timespan of Tavistock Abbey, being restricted to the later medieval period. Inferences are, however, made about the organisation and management practices existing under its forerunner, the Earldom of Cornwall. Fox and Padel also deal with the later medieval period, spanning the 14th–16th centuries, and although the Arundell estates were mainly in mid- and west Cornwall, there is a wealth of information on agricultural practices and tenurial arrangements. Some landholdings of the Arundells were located in the local study area, however, albeit mainly acquired through later marriage and inheritance.

A limited number of primary sources have been used where they are available in published form. Already referred to above is the Lanhydrock Atlas (Holden *et al* 2010), which provides a set of beautifully prepared maps of the estate's holdings dating to 1694, although unfortunately only a small number of holdings are of settlements within the local study area.

Place-names

Place-names are an important tool in understanding the historic landscape, particularly where they point to possible cultural distinctions. Mention has already been made of the tangible differences between Cornwall and Devon, particularly with the large number of place-names of Brittonic origin present in Cornwall. This will be explored to a limited extent in Chapter 9.

A number of key sources were used in this study. Whilst there are volumes produced by the English Place-Name Society for many counties in England, there is not one for Cornwall, there being only an unpublished typescript (Gover 1948), although Padel's (1985) *Cornish Place-name Elements* provides a useful alternative source. The volume for Devon is now somewhat dated (Gover *et al* 1931), although is referred to extensively in this study. Field-names are more sensitive to landuse and to ownership but are subject to change over time and to be generally more recent. There are, however, examples of lost settlements being identified in this way (Herring and Thomas 1993). The scale at which an analysis would need to be undertaken was too large, however, to be considered for this study.

Methodology

As has been stated, the aim of this study has been to look for variation in the historic landscapes of Cornwall and Devon and to identify whether there were significant differences between the two counties. This would be undertaken through consideration of two main objectives: looking at settlement form and relative nucleation/dispersal on the one hand, and the spread of evidence for former open field on the other. This would principally be undertaken using a map regression, based on the First Edition Six Inch to One Mile OS maps of the 1880s/90s and the Twenty-Five Inch to One Mile OS maps of the same period, with additional layers of data employed to aid in the interpretation of the map evidence. It was hoped that by combining a range of datasets it would be possible to draw some meaningful conclusions about the form and organisation

of the medieval and early post-medieval landscapes of the local study area and, by implication, of the South West as a whole.

ArcMap

Analysis was undertaken using a geographic mapping program produced by the international computer software company ESRI. Two versions were used, initially ArcMap10, with ArcMap10.7 employed in the final stages. A range of electronic datasets was downloaded under licence from Edina Digimap (a centre for digital expertise for academia, based at Edinburgh University), with the basic framework formed of modern Ordnance Survey base referencing. To this was added digital drawings of the coastline and the network of rivers in the South West, as well as contour mapping. Contours are available digitally from the Ordnance Survey as separate adjoining 'tiles', each of 10km x 10km, rather than individual contour lines, and it was therefore necessary to create new digitised drawings (shapefiles) of selected contours, in this case the 200m and 300m lines. All tiles covering the local study area and surrounding areas were switched on and the relevant contour lines traced over to create new drawings. The shapes (polygons) thereby generated were then shaded in tones of grey, in order to provide a topographical backdrop to the distribution plots that were subsequently to be created, although in the final versions this was replaced by an outline of moorland/common and late enclosure.

The real backdrop to the analysis, however, was the 19th-century Ordnance Survey mapping, available on-line through Edina Digimap. Ordnance Survey First Edition Six Inch to One Mile maps of the 1880s and 1890s (1:10,560), were downloaded as separate tiles into the ArcMap project and geo-referenced to the modern OS. Where there were gaps in the 1880s/90s map extracts they were filled by using the slightly later First Revision 1900s edition. Extensive subsidiary use was also made of paper copies of the map extracts, as it was felt that these provided the best means of looking at a parish in its entirety, and also to facilitate comparison between parishes. This allowed viewing both of the entire study area at a glance, and also comparison between one area and another, something which was not possible on a computer screen. Individual sheets were therefore printed on A3 paper at a scale of 1:10,000, which is

therefore very close to the size of the original maps. Much use was also made of the more detailed Twenty-Five Inch to One Mile scale maps, for cross-referencing, along with comparison with modern satellite and photographic imagery, to enhance understanding of topography. A range of such photographic sources are available, for example, through Digimap and Google Earth.

The framework for the local study area was based on the ecclesiastical parish boundaries compiled from the Tithe Surveys of the 1840s. The main modern source for this is *The Tithe Maps of England and Wales* (Kain and Oliver 1995), with the maps recording parish outlines. Ecclesiastical parishes will often differ from the modern civil parish equivalents, particularly where the former were deemed as too small to remain viable, or where there has been some small scale rationalisation, for example the reallocation of fields/parcels of land from one parish to another. Where there is documentary evidence, either in the form of charters or records of parish perambulations, the indications are that the tithe maps reflect fairly closely the situation prevailing in the late medieval period (Kain and Oliver 2001). Kain and Oliver's map is available as a GIS shapefile, and this was downloaded into the ArcMap project.

Parish boundaries were indicated on the OS maps but to make them stand out were marked in coloured pencil on the paper copies. In the ArcView project, those parishes which were to make up the study area were selected and their boundaries coloured black. The individual parish polygons were then made transparent so that the underlying 19th-century mapping could remain visible. Parishes lying outside the limits of the local study area were de-selected and a boundary line for the local study area created in red. At the time of the tithe apportionments, a number of parishes still had detached portions, particularly those in Devon, most of which had been rationalised by the time of the late 19th-century OS maps.

As will be described in more detail in Chapters 5-7, the study was progressed by defining different settlement and field system types and creating shapefiles for each, as point data for the former and polygons for the latter. The central

point of a settlement would be marked, which, given the small size of most settlements, was a fairly simple matter. In the case of linked farmsteads (see Chapter 5), whereby two or more settlements share a name element and some proximity to one another, an estimated central point between them was selected. Field systems by their nature cover areas of land, and were therefore recorded as polygons. Settlement distributions were also analysed at the parish level, and it was therefore possible to shade parishes (as polygons) according to predetermined density levels, as described in Chapters 5 and 6. Other polygons created included areas of moorland and of late enclosure, with the two combined providing an approximate minimum extent of waste ground pre-18th/19th-century enclosure.

Fieldwork

Extensive fieldwork of the local study area was undertaken during the course of the project, to provide as great a familiarity with the landscape as possible. Topography may influence landform patterns to a great extent, for example; ground may be too steep for ploughing, and the terrain can be more undulating than is apparent from simply examining two dimensional maps. River valleys, such as those of the Inny, Lynher and Lumburn, are deeply incised in their lower courses, influencing the location of settlement, the positioning of woodland and pasture and, potentially, the shape of fields.

In the early stages of the project, planned tours of specific parts of the local study area were undertaken by car in order to gain an appreciation of the range of landscapes present. Certain areas were already fairly familiar, for example along the axis of the A30 between Bodmin and Okehampton, and also Launceston and the group of parishes to the north of the town, including Werrington, North Petherwin and Boyton. A second route commonly driven was through the parishes of Liskeard, Menheniot, St Ive and Callington, following the A390 across the rivers Inny and Lynher, and thence along the A388 northwards, through the parishes of Stoke Climsland, Lezant and Lawhitton to Launceston. Another route commonly taken was to cross the Tamar eastwards at Gunnislake and follow the A386 through Tavistock, Mary Tavy, Bridestowe and Sourton.

In June 2014, a circular drive was made through a selection of Devon parishes between the western fringes of Dartmoor and the east bank of the River Tamar. This followed a route southwards to the village of Lydford, south-west to Brentor, north-west to Lifton and then north-eastwards to Lewtrenchard and Bridestowe. Other tours of parts of the local study area followed over the next few years, for example in 2018 through Ashwater, Highampton, Black Torrington, Clawton and St-Giles-on-the Heath.

More detailed knowledge of the landscape of central and east Cornwall and west Devon followed a move to the region in mid-2017, with many settlements and also individual properties visited during the course of work unconnected with this project. By the time of completion, all parishes within the local study area had been visited, along with the majority of church settlements and a large number of other hamlets, improving understanding of position and form of settlements and how they fit into the wider landscape. Driving through the local study area on a daily basis has also allowed for a greater understanding of the landscape, its topography, river valleys, woodland and modern agricultural regimes.

The final decision to make was the order in which the research would be undertaken. Of the two arms of the study – settlement and open field – it was considered that the former determines the structure of the landscape to a greater degree than the latter, the rationale being that field layouts are dependent upon the distribution of settlement. The form and distribution of settlement as represented on the 19th-century OS maps was therefore taken first, in Chapter 5, followed in Chapter 6 by an attempt at reconstructing late medieval and early post-medieval settlement patterns. The identification of former open field and analysis of their distribution was undertaken in Chapter 7, to be followed by an integration of the two strands of evidence in Chapter 8.

5

Rural Settlement Types and Patterns in the 19th Century

Introduction

The following four chapters deal with the two main objectives of this thesis in relation to the historic landscape – a mapping of variation in settlement nucleation and distribution on the one hand and the distribution of possible open field on the other. The major part of the exercise is to undertake a retrogressive map analysis, starting with 19th-century maps and stripping back layers in order to arrive at, so far as is possible given the available evidence, a reconstruction of the medieval and early post-medieval landscapes.

In Chapter 3, aspects of the physical and cultural landscape of the South West Peninsula were examined in order to identify discrete regions, or *pays*. The aim of this chapter is to look further into the cultural landscape of the local study area by examining the pattern of rural settlement as it existed in the late 19th century, primarily using the Ordnance Survey First Edition Six Inch to One Mile maps of the 1880s and 1890s. These provide the most comprehensive coverage of the landscape prior to the major changes that were to affect the rural landscape in the 20th century and, with their level of detail, provide a good starting point upon which to build more detailed interpretations of the historic landscape.

In broad terms, the objective of this chapter is to formulate a typology of rural settlement types and then to examine the pattern of their distribution against the backdrop of both the physical landscape and the historic framework of the

region, in this case ecclesiastical parishes. Following a discussion of the methodologies employed, a range of settlement types are defined and explained, with examples of each described and illustrated using extracts taken from 19th-century mapping available through Digimap. Each settlement has been plotted in ArcMap and colour-coded according to type. Whilst these simple visual representations give some idea of how different categories of settlement were distributed across the landscape, the relative degree of settlement nucleation and/or dispersal in the 19th century is the real objective of this stage of the study. Each parish within the local study area is therefore assessed on the basis of the range of settlement present and placed in one of six categories according to the degree of settlement nucleation or dispersal. The results are then illustrated in plan form with parishes shaded in varying tones of grey, and the significance of the distributions then discussed.

Whilst one major strand of analysis is whether there were any discernible differences in the relative types and distribution of settlement between Cornwall, on the one hand, and Devon, on the other, local variations will also be of interest. It should be borne in mind, however, that the eventual aim is to attempt to draw conclusions about the historic rural settlement in the South West Peninsula including, where possible, of the later Middle Ages. To achieve this goal, further layers of data will subsequently need to be added, including an examination of place-names and selected historical records pertaining to individual settlement. These themes will be dealt with in Chapters 6-10.

Comparative Studies and Rationale

To date, the most wide-ranging national study of historic rural settlement has been that of Roberts and Wrathmell, with their *Atlas of Rural Settlement in England* (2000; 2002). Also using 19th-century mapping, their key illustrations employed a dot for each settlement nucleation, with other maps using shading to indicate density of dispersed settlement. Dealing with the country as a whole, fairly large provinces were defined, although they did also identify numerous sub-provinces. More directly relevant to studies of settlement in the South West, Rippon (2012) examined rural settlement within a block of parishes spanning

east Devon, west Somerset and west Dorset, quantifying the degree of settlement nucleation in an area traditionally seen as a transitional zone between the South West and Central Provinces. Using the mid-19th-century ecclesiastical parishes as a framework, each parish was then assigned to one of a number of categories, based on parish size, the range of settlement types within each parish (village, hamlet, farm), and association with possible former open fields. The study was successful in revealing a pattern of nucleated settlement to the east of the Blackdown Hills, with more dispersed patterns in the east Devon lowlands and on the intervening Blackdown Hills.

The current study has similar aims to those of *Making Sense of an Historic Landscape* (Rippon 2012), in that it aims to identify differences in settlement pattern either side of an historic boundary, in this case the River Tamar. Both studies employ a broad transect of parishes as local study areas, for example, although different approaches have been used. In the former, there were relatively distinct differences in settlement pattern and in the agricultural landscape as one travelled from west to east across the Blackdown Hills; nucleated settlement with evidence for former open fields being particularly evident in west Somerset. This allowed for a relatively rapid and subjective approach, as the differences in settlement pattern were clear. This is not the case when looking at east Cornwall and west Devon, where settlement was more dispersed generally, and a more sophisticated approach was accordingly required. Therefore, where Rippon was able to categorise each parish by a visual appraisal of the 19th-century maps, using a range of criteria which included the presence of agricultural villages and evidence for former open fields, this present exercise begins by concentrating on settlement alone. This analysis has also been undertaken in much more detail, with every settlement within the local study area identified, categorised and tabulated in an excel spreadsheet, which was then used to create distribution maps. Other aspects of landscape character will be added in subsequent chapters.

Defining Settlement Typology

This exercise was undertaken using the GIS system ArcMap, with a project created specifically for looking at settlement distribution. Settlement analysis was undertaken with reference to the Ordnance Survey First Edition Six Inch to One Mile maps of the 1880s and 1890s (1:10,560). All settlements within the local study area were allocated to one of a number of pre-defined categories and recorded in an excel spreadsheet, with one record per settlement. Each entry also recorded the parish in which the settlement was located and, for hamlets and larger settlements, a provisional estimate of the number of tenements contained within them. A total of 2,614 settlements were recorded for the local study area, each of which was allocated to one of the following categories (defined and described in more detail later in this chapter):

Town
Village
Churchtown
Developed Churchtown
Large-sized Hamlet
Medium-sized Hamlet
Small-sized Hamlet
Linked Farmsteads
Post-Medieval Hamlet
Large Isolated Farmstead
Small Isolated Farmstead
Miscellaneous

Consideration was also originally given to the positions of settlements in the landscape, for example in relation to the road network and to the river system, and attempts made to characterise settlements accordingly. This proved to be too unwieldy and complicated an approach, however, and was abandoned in favour of a straight characterisation of settlement form and size. Some such aspects, however, have been considered in a more qualitative way in Chapters

8-10. This includes, for example, whether settlements are integrated with the road network or are situated on side, or 'spur' lanes (see Chapter 6).

Although the actual analysis was carried out using OS First Edition Six Inch maps, in many cases it was found that the level of detail depicted was insufficient to provide the degree of certainty required to accurately categorise a settlement, particularly the distinction between large isolated farmsteads and small-sized hamlets. Extensive subsidiary use of the more detailed Twenty-Five Inch to One Mile OS maps, which are also available in Digimap, was therefore made, with the entire local study area surveyed visually and every settlement reassessed. The greater resolution provided by the larger scale maps allowed settlements to be seen in enhanced detail, with individual buildings represented with greater precision. This increased accuracy subsequently led to the reallocation of a number of settlements to other categories, with a corresponding increase in confidence level.

Every settlement allocated to one of the main settlement types was then recorded as point data in the ArcMap project, each category as a separate shapefile (a digital file storing data with a particular attribute). The data is geo-referenced and it is therefore possible to overlay shapefiles on a variety of backdrops, such as the network of rivers, topography and geology, to look for patterning in the distributions. Not all categories were plotted, with known post-medieval mining settlements, for example, and cottages specifically excluded, as were inns and isolated non-conformist chapels. Also left out were mills and country houses, which were felt at this stage to add little to our understanding of the development of the medieval rural landscape and to be of more specialised interest.

Typology of Settlement

Towns

Within the local study area there were four towns in the 19th century – Launceston, Liskeard, Callington and Tavistock. Although not directly relevant

to the objective of characterising the rural landscape, their influence on the areas around them will have been significant, as centres of population, as markets for local goods and services, and as commercial transport hubs with potentially extensive hinterlands. This would have been particularly the case with the two largest, Tavistock and Launceston, and also with large towns close to the boundaries of the local study area, such as Okehampton and Plymouth. There were also settlements which during the medieval period were regarded as towns, having been granted borough status by charter. Lydford, for example, was classed as a borough, but by the 19th century was no more than a village and was therefore categorised as such in this study (Beresford and Finberg 1973, 93).

Villages

These were substantial settlements in the 19th century, serving a wider rural community, with fifty or more tenements and with a good level of service provision, usually including a church, vicarage and school, and often a range of other facilities, such as chapels, post offices, smithies and inns. Most villages had many small enclosed spaces, such as yards, gardens and orchards, interspersed between the buildings. Where present, the village was the main settlement within a parish, invariably giving its name to the ecclesiastical parish. There were few examples in the local study area, most settlements failing the size qualification. The term 'village' is therefore used in its more modern sense as being a large rural settlement.

One example is that of Menheniot, one of the largest of the Cornish settlements within the local study area (Figure 5.1). Oriented north–south at the staggered intersection of five lanes, at the heart of the village was the church of St Lalluwy (wrongly attributed on the OS map to St Antoninus) and its vicarage. The southern limit of the village was defined by Pool Hall, a house set within its own grounds, whilst most other dwellings were located to the north and east of the church, at the main road junction. In the late 19th century the village included a police station and two non-conformist chapels. Located in a lead mining district, the village expanded considerably in the period 1840-70.

Figure 5.1: Menheniot was the principal settlement in the Cornish parish of that name and was one of a small number of villages within the local study area. The settlement's axis was aligned north-south along the main street through the village, with St Lalluwy church (not St Antoninus as described on the map) lying at its centre. The settlement comprised approximately 30 tenements and service provision included a police station and non-conformist chapels (Digimap: Six Inch to One Mile OS 1889).

Churchtowns

'Churchtown' is a term which is specific to the South West, and refers to a distinctive form of settlement, often comprising a church and a manor house, and perhaps one or two other buildings, from a range including a home farm, vicarage and Sunday school, with perhaps a small number of dwellings. The description has some historical pedigree, being used by Polwhele, for example, as a term in the late 18th century (Polwhele 1816, 133). It is a common type of settlement in both Cornwall and Devon and in this form, or its developed variety (see below), they were present in the majority of parishes within the local study area. This reflects the generally dispersed character of rural settlement in the South West, with an otherwise isolated church serving a wider rural community. There will often have been a series of enclosed spaces, such as gardens,

paddocks and orchards. The question of whether some such churchtowns may once have been larger settlements but have subsequently contracted in size will be examined in Chapters 6 and 10.

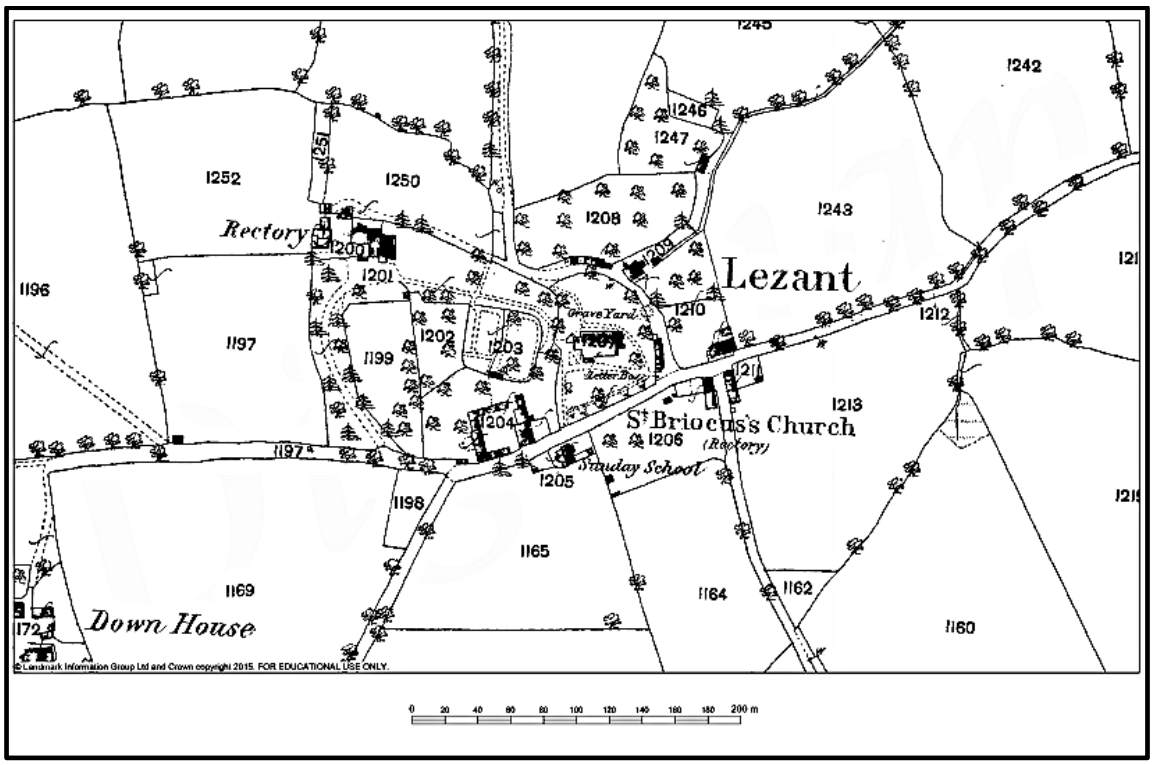


Figure 5.2: Lezant, to the south of the major Cornish town of Launceston. This was a classic churchtown with a church and rectory, a Sunday school and a courtyard farm. The number of domestic buildings was very limited, with three or four houses on the east side, with the settlement serving a wider, dispersed rural community. The collection of small closes around the church may point to the loss of some dwellings some time prior to the 19th century. (Digimap: Twenty-five Inch to One Mile OS 1884).

One such example is the small Cornish churchtown of Lezant, to the south of Launceston, where the church of St Briochus sits at the intersection of four lanes (Figure 5.2). The lane from the north skirts the boundary of the churchyard, the typical ovoid enclosure associated with many churches in the South West, known as *Lans* (Turner 2006, 31). The lanes define a cluster of small enclosed fields and orchards. The large farm to the west of the church faces directly onto the main east–west lane and consisted of a collection of farm buildings arranged around a central courtyard, with the rectory lying to the north-west.

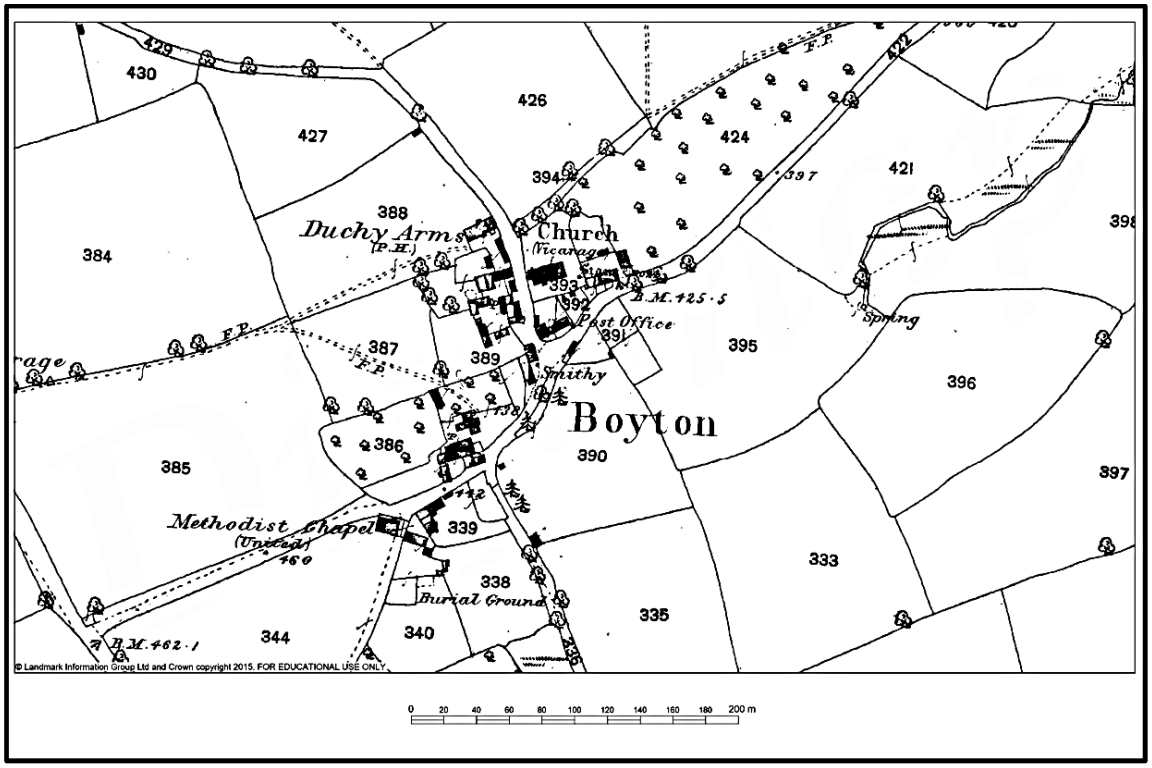


Figure 5.3: Boyton churchtown is located on the west side of the upper reaches of the Tamar, on the Culm Measures of north Cornwall. The number of individual dwellings was limited, although there was some service provision, in the form of a public house, a post office and a smithy. (Digimap: Twenty-five Inch to One Mile OS 1884).

Many churchtowns may have acquired limited additional service provision in the 18th and 19th centuries. Boyton churchtown, for example, had a tight cluster of buildings around a road intersection, with a courtyard farm opposite the church, and a vicarage, post office, smithy and a public house, as well as a cluster of cottages (Figure 5.3). On the south-west edge of the settlement there was a Methodist chapel, an obvious post-medieval addition, with cottages between it and the centre of the settlement. The curving road layout around the church, with a number of empty closes, may suggest that there were once more dwellings in the settlement (a pattern discussed in Chapter 6).

Developed churchtowns

Almost to be regarded as small villages, developed churchtowns were the main church-based settlement in most of the remaining parishes within the local study area. With at least twenty tenements each they contained some service

provision, including a church, with also often a vicarage, post office, school or smithy. Some may have been larger settlements in the medieval period whilst others may owe their size to post-medieval expansion. The latter scenario appears to have been the case with St Cleer, which grew rapidly on the back of the Caradon copper mining boom of the 1840s.

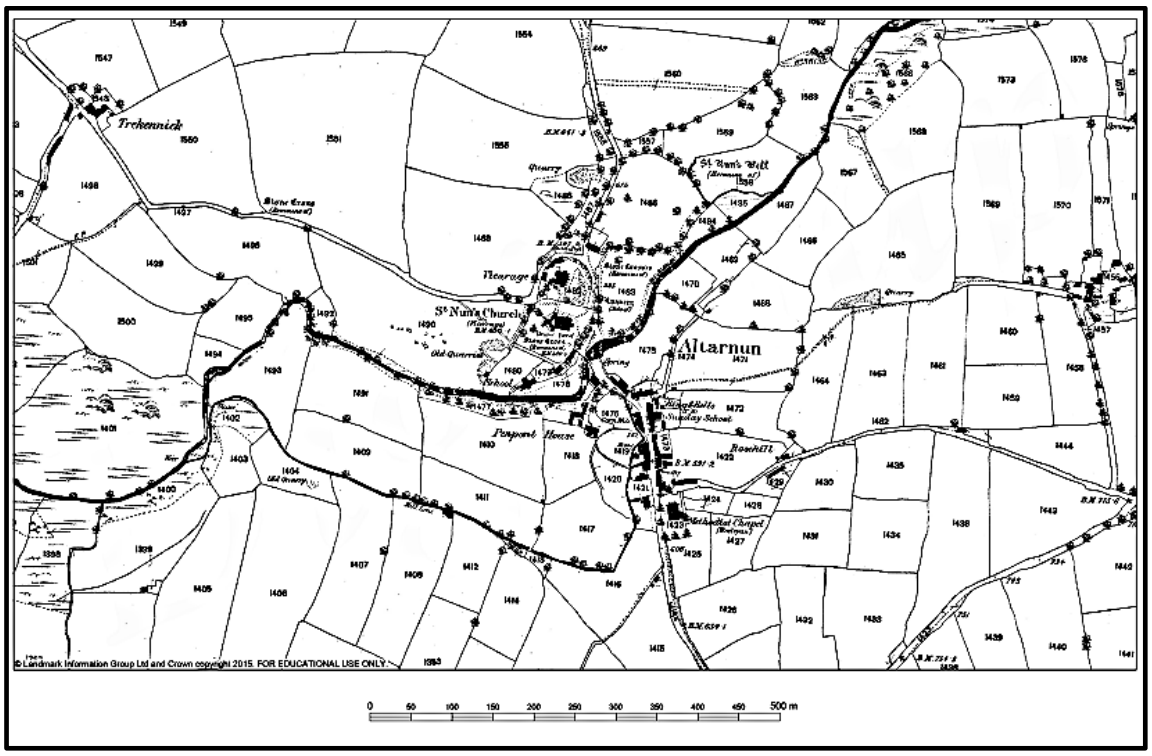


Figure 5.4: Altarnun developed churchtown, on the north-east edge of Bodmin Moor, in Cornwall, showing the ecclesiastical centre on the north side of the river, with the church and vicarage, plus evidence for further religious buildings and the well of St Nun. To the south of the river there was dense residential housing, with a Methodist chapel at the southern limit of the settlement. (Digimap: Twenty-five Inch to One Mile OS 1883).

Altarnun, on the north-eastern edge of Bodmin Moor is a good example, having an ecclesiastical core on the north side of Penpont Water, a tributary of the River Inny, consisting of St Nonna's church, a vicarage, school and a small number of other dwellings (Figure 5.4). An open space on the east side of the church, leading to the river, is the reputed site of a pre-Conquest monastery (Knowles and Hadcock, 1971, 466), and to the north of this is the extant holy well of St Nun. That part of the settlement to the south of the river was composed of cottages lining both sides of the main road, with a Sunday school,

public house and a mill, and with a Methodist chapel at the far southern end. Penpont House, a manor recorded in Domesday Book, was itself located adjacent to the river. In the case of Altarnun, the main settlement would therefore seem to have grown up on the opposite side of the river to an ecclesiastical complex.

Large-sized hamlets

Settlements categorised as large-sized hamlets consisted of ten or more individual tenements, up to a maximum of forty-nine, usually comprising a mixture of mainly farms and cottages. The largest examples had in excess of thirty or more dwellings, although most were in the ten to twenty dwellings range. Sometimes, there was limited service provision – occasionally a smithy, chapel, school or public house – although very often there was none, as befitting their primary function as agricultural settlements. Typically, hamlets will be at the intersection of several roads and lanes, often arranged around a central, open space, with buildings interspersed with yards, gardens and orchards. Roads meeting at the centre of a hamlet will often arrive there indirectly, skirting around the edges of blocks of adjacent, enclosed fields. The central spaces of hamlets, and frequently of farms also, are often referred to in post-medieval documents as 'townplaces' (Henderson and Wedell 1994, 132).

In the Cornish parish of Lezant, for example, the large-sized hamlet of Rezare consisted of around fourteen tenements, located at the intersection of four roads, the large townplace at the centre seeing some building encroachment on its western side (Figure 5.5). Many of the buildings were set back within individual plots rather than fronting directly onto the street frontages. This suggests tenements that were fairly well established, in contrast to the rows of street frontage cottages which are a hallmark of much of the 19th-century development in the region. Service provision was limited, with only a single post office indicated on the 1884 1:2500 OS map.

Bohetherick, in the small south-eastern Cornish parish of St Dominick, is located at the intersection of five lanes, and comprised approximately fourteen tenements, including a farm on the northern edge of the settlement (Figure 5.6).

There was a small cluster of buildings around the road intersection, opposite to the farm. The fields to the south of these took the form of long curving closes, extending south-eastwards from one lane and being bounded by another on the south side. A central open space, or 'townplace' is a common element to many large-sized hamlets.

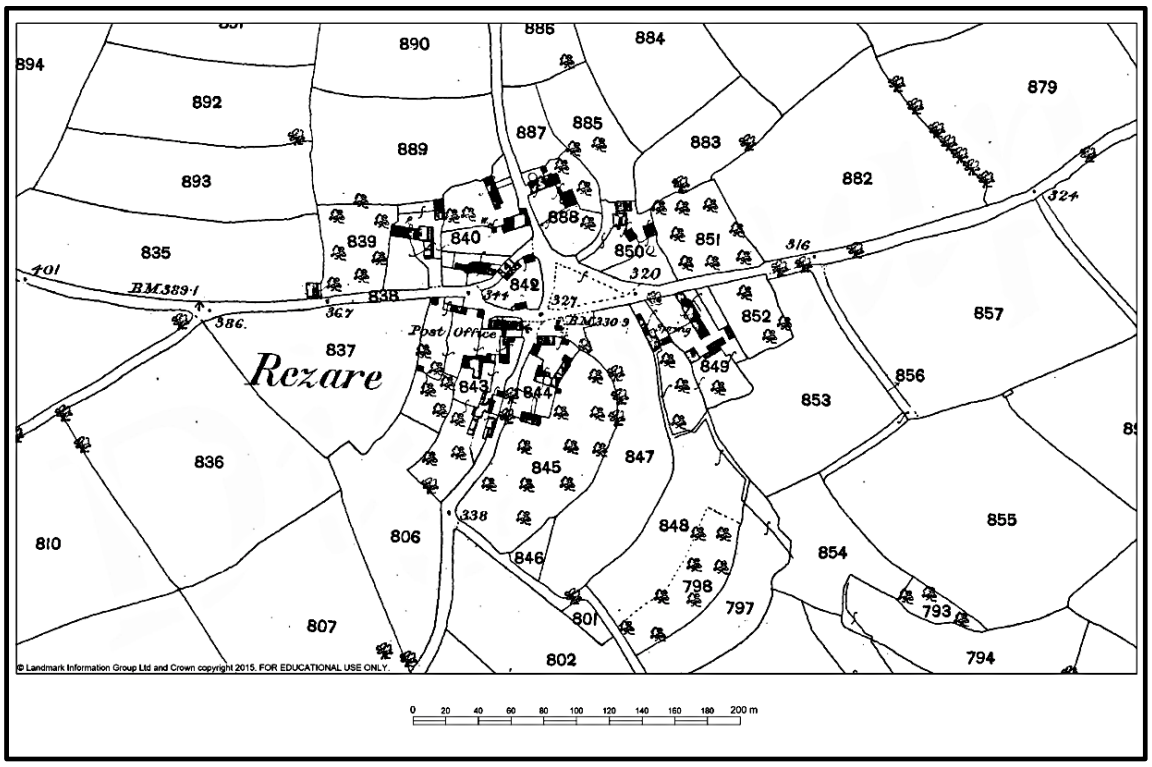


Figure 5.5: Rezare in the parish of Lezant, Cornwall, was a typical large-sized hamlet, with tenements clustered around the crossroads. What may originally have been an open space at the centre of the settlement has been partially encroached upon. Although possessing a post office, there was no other service provision, which would otherwise have marked the settlement out as a village. (Digimap: Twenty-five Inch to One Mile OS 1884).

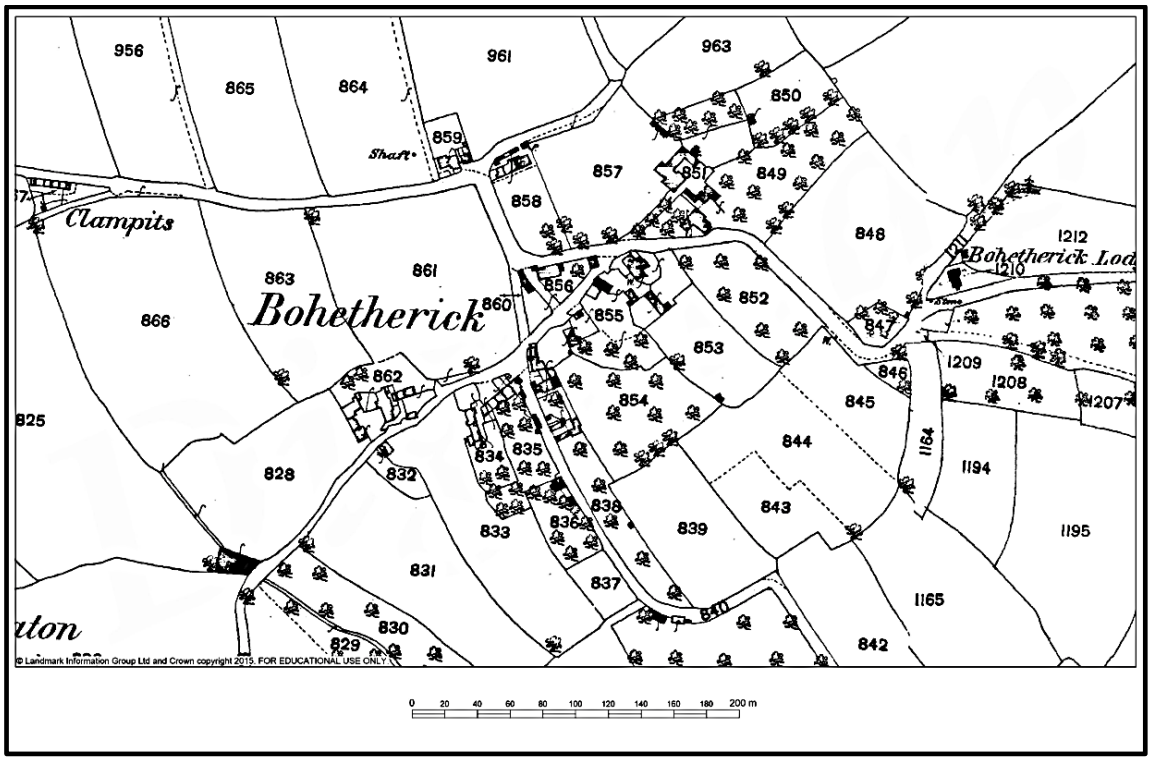


Figure 5.6: Bohetherick, St Dominick, Cornwall, is located at the intersection of five lanes, which appear to follow the boundaries of cropping units (see Chapter 7 for explanation). Within the settlement dwellings were fairly dispersed around the centre, with several small closes, perhaps once the plots of former tenements. Long, narrow curving closes, particularly those extending south-east from the centre of the settlement, suggest enclosure of former open fields. (Digimap: Twenty-five Inch to One Mile OS 1883).

Medium-sized hamlets

In most respects, medium-sized hamlets share many of the same characteristics as their larger counterparts, and are defined as an aggregation of farms and cottages in the range of five to nine tenements. They are also often located at the intersection of several lanes.

Some medium-sized hamlets appear to sit within the corners of sub-rectangular enclosed field systems, often with lanes skirting around two or more sides. Trevivian, in the Cornish parish of Davidstow, sits against one such dogleg, created by two right-angled turns in the principal lane through the hamlet, and following the east and south edges of a block of elongated enclosed fields (*Figure 5.7*). In the late 19th century, the settlement appears to have comprised

five farms, mainly clustered together at the southern end of a possible block of former open fields.

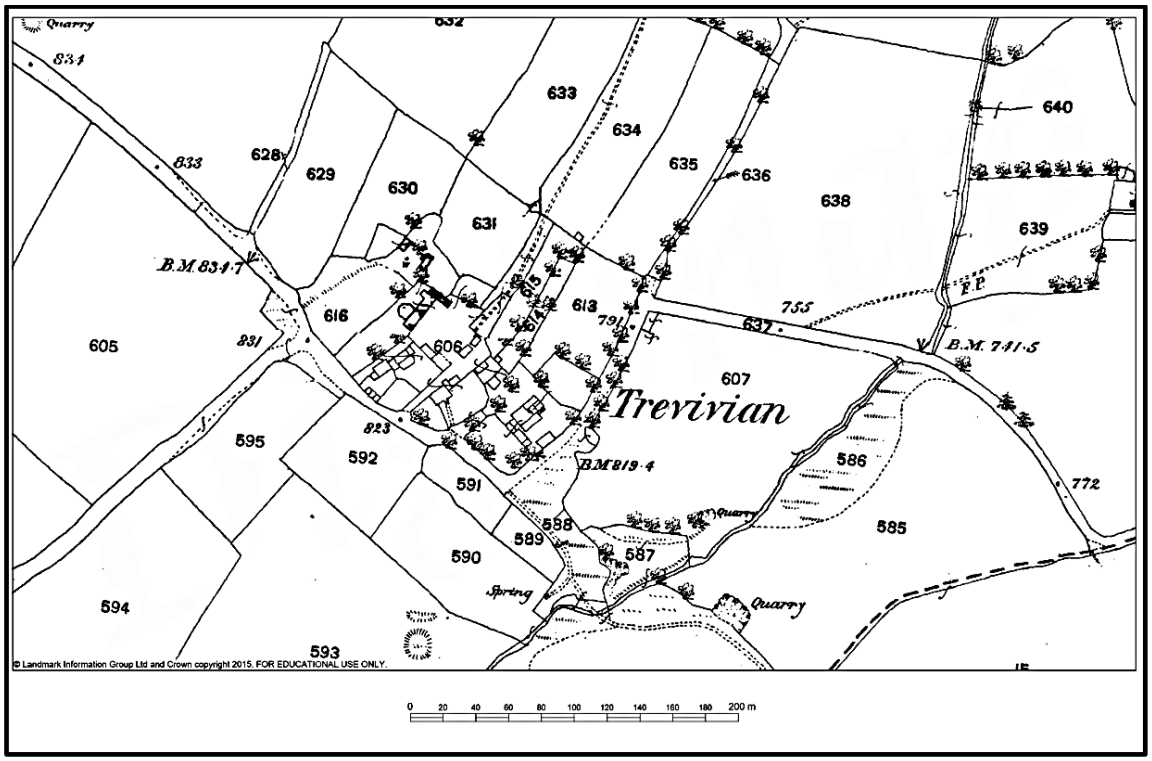


Figure 5.7: The medium-sized hamlet of Trevivian, Davidstow, Cornwall, sits in the right angle created by a doglegged lane which appears to follow the boundaries of long, narrow, curving closes, perhaps evidence of former open fields. (Digimap: Twenty-five Inch to One Mile OS 1883).

Small-sized hamlets

There were a significant number of settlements that consisted of between two and four tenements, often one or two farms, with perhaps two or three other dwellings. As would be expected of such small settlements, there was invariably no service provision. It was difficult in some cases, however, to distinguish small hamlets from collections of buildings belonging to a single farm, when relying only on a visual survey of 19th-century maps. The central, common open space of a small-sized hamlet, as noted above often referred to in post-medieval documents as a townplace, may be indistinguishable from farmyards, enclosed by barns and other agricultural buildings, without further supporting evidence. There has therefore inevitably been a degree of judgement in distinguishing between the two classes of settlement.

East Kimber in the Devon parish of Northlew on the Culm Measures, for example, follows the common pattern of a cluster of three farms located at the junction of two lanes (*Figure 5.8*). The layout of small enclosed spaces around the core of the hamlet, suggests that there may once have been more tenements, with building plots subsequently becoming vacant (see discussion Chapter 10).

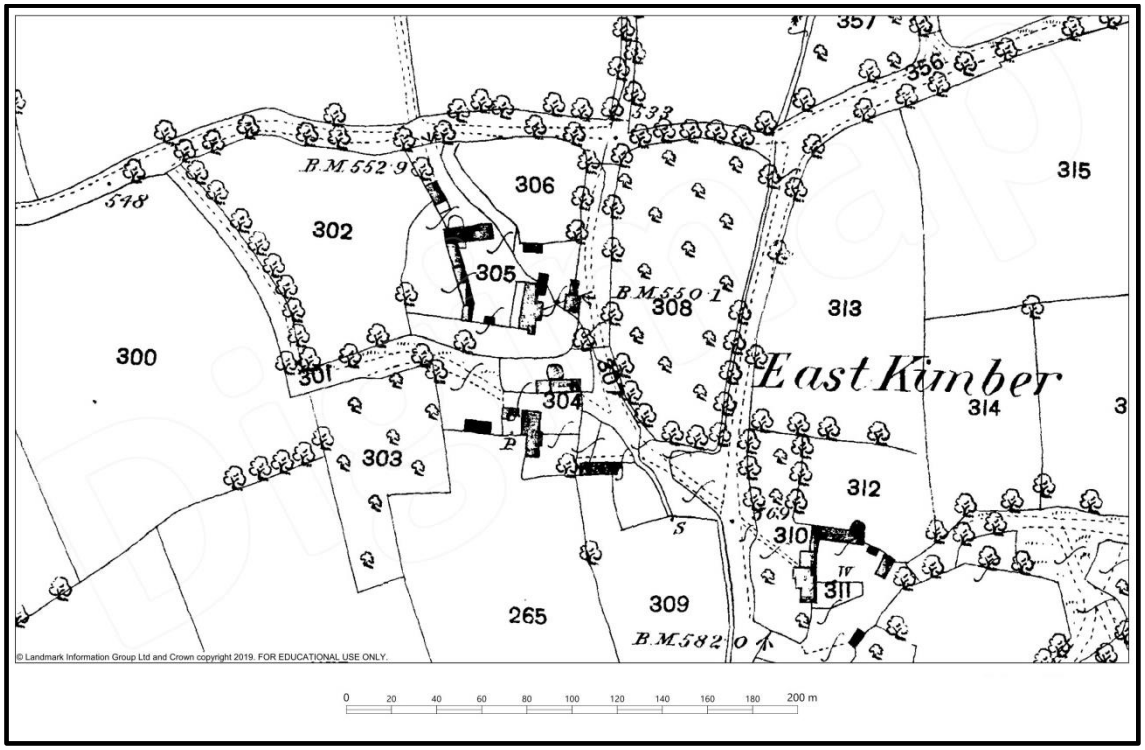


Figure 5.8: East Kimber was a small hamlet consisting of three farms around a junction of several lanes. To the east and west of the settlement are large rectilinear fields with curving parallel boundaries, cropping units suggestive of former open field (see Chapter 7). (Digimap: Twenty-five Inch to One Mile OS 1885).

Linked Farmsteads

Whereas the other settlement categories are based on morphology, linked farmsteads are characterised by settlements that lie in close proximity to one another that have a place-name association, distinguished by locational prefixes such as Higher, Lower, North, South, East and West. The use of the term 'linked farmsteads' is employed to reflect a process in which a settlement has become subdivided over time, with a consequent dispersal of tenements from

an original single, core hamlet. The category excludes those settlements where the descriptor simply denotes relative location of a settlement in the landscape, for example in relation to another settlement or to topographical features, such as rivers. It also excludes cases where such farms lie adjacent to one another, effectively forming small-sized hamlets, as is, for example, the case with Higher and Lower Eastcott, in the Devon parish of Northlew (Figure 5.9).

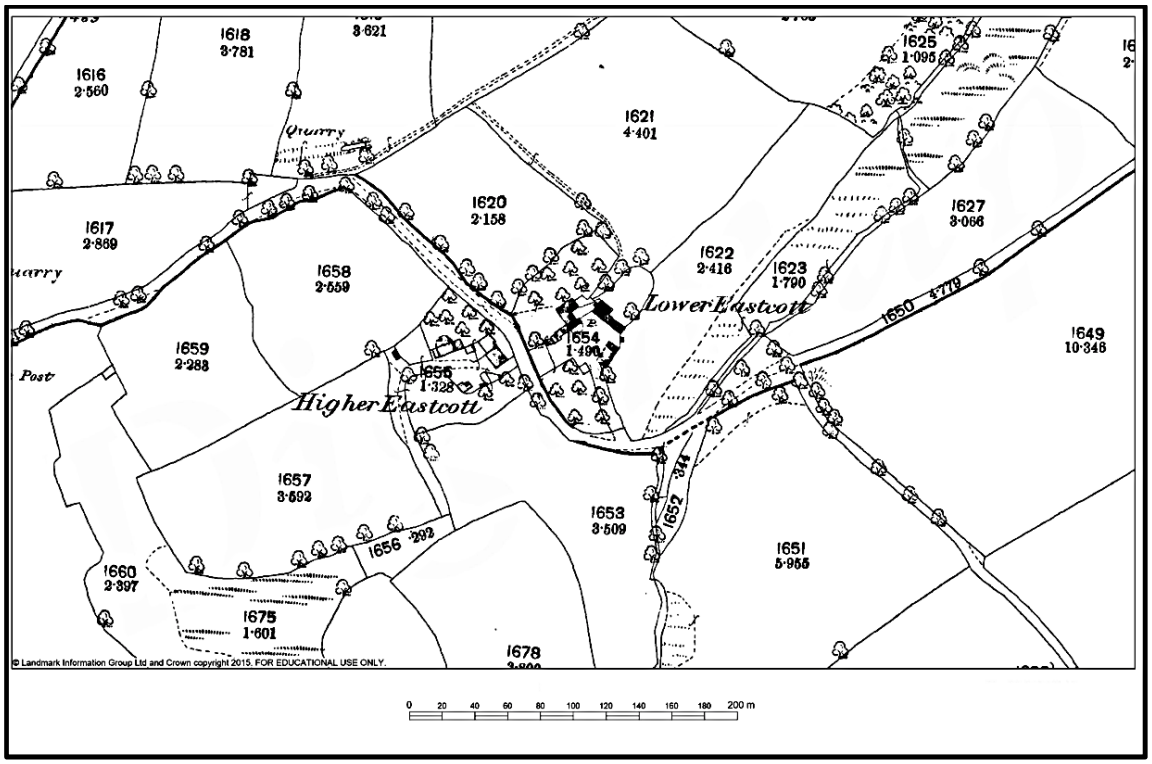


Figure 5.9: Higher and Lower Eastcott face each other on opposite sides of a lane, doglegging around field boundaries, in the parish of Northlew in the north Devon Culm Measures. Therefore, despite the use of two names to distinguish the farms, the settlement is here regarded as a small-sized hamlet. (Digimap: Twenty-five Inch to One Mile OS 1886).

In many cases, linked farmsteads consisted of two associated but separate farms, a typical example being Higher and Lower Trengale in the Cornish parish of St Cleer (Figure 5.10). Higher Trengale was located on a through lane, with buildings to either side of the road. To the north of the road there were several long, narrow fields, which may be evidence for the former presence of open fields. Lower Trengale was situated a short distance to the south on a track leading off the lane. In plan layout, buildings were arranged around a central courtyard, which could be indicative of a 19th-century rebuild.

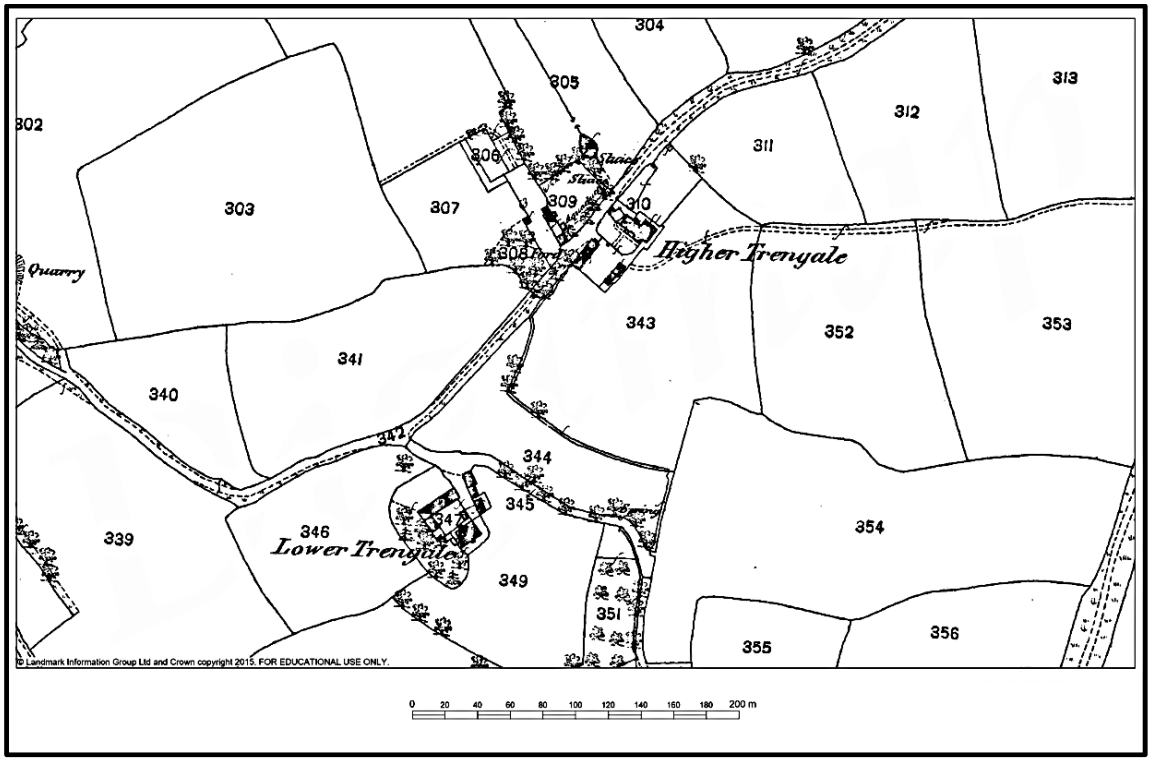


Figure 5.10: The paired farms of Higher and Lower Trengale in St Cleer, situated approximately 200m apart. Long narrow fields are seen on the north side of Higher Trengale, which may be the site of the original hamlet. Lower Trengale lies on a short spur road and consists of a contiguous range of buildings around one main courtyard, perhaps indicative of a later re-build. (Digimap: Twenty-five Inch to One Mile OS 1882).

More complicated arrangements sometimes occur, as can be seen with the example of Clubworthy, Higher Clubworthy and Little Clubworthy, in North Petherwin, illustrating at least two stages in the evolution of the settlement (Figure 5.11). Clubworthy and Higher Clubworthy may have been established in an initial subdivision of the original settlement. Little Clubworthy has the appearance of a later addition, however, in fields to the south-west and reached via a spur road or track, and may have been established on newly enclosed land on the edge of the original holding.

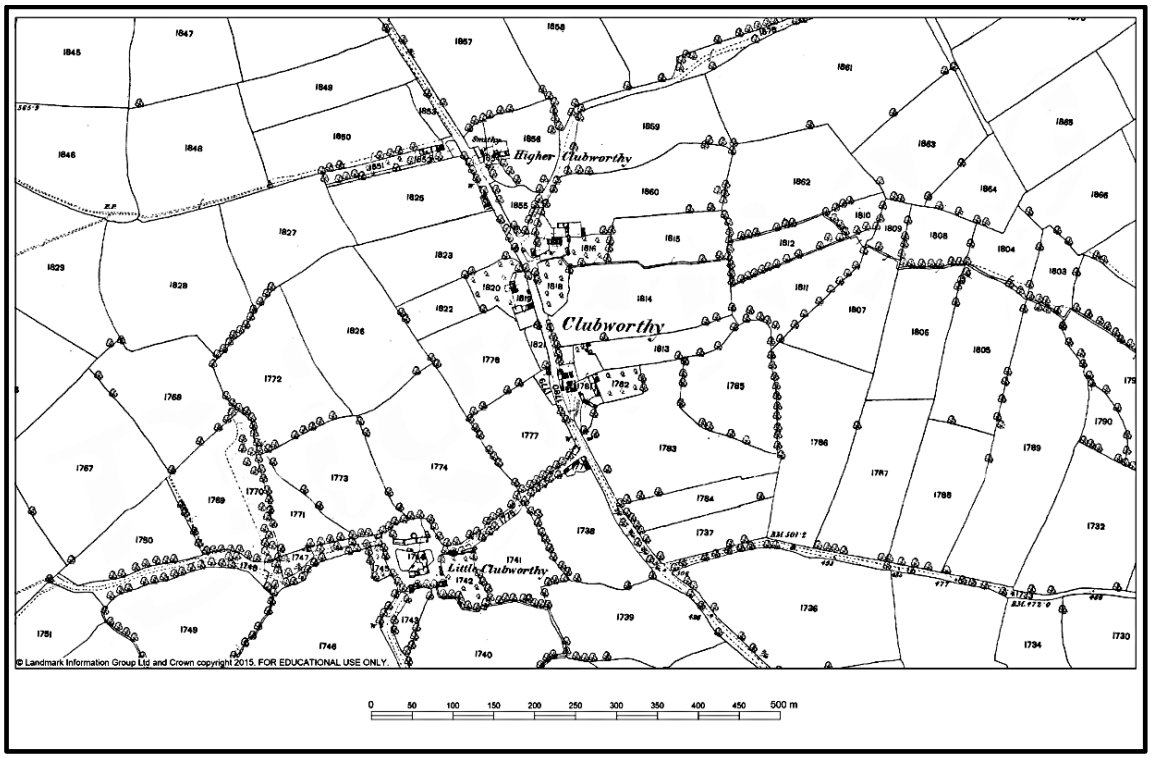


Figure 5.11: Clubworthy, Higher Clubworthy and Little Clubworthy, in the Cornish parish of North Petherwin. The former may be the site of the original hamlet, with Higher Clubworthy established a short distance to the north, both on a main lane. Little Clubworthy has the appearance of being a later, planned farm, established to the south and reached via a spur road. (Digimap: Twenty-five Inch to One Mile OS 1884).

As noted above, the linked farmstead category does not include all such occurrences of groups of settlement with shared names. In particular, use of cardinal points to modify settlement names may describe the location of a settlement in relation to the core settlement of a vill, for example Norton (north farm) and Sutton (south farm). Alternatively, a landscape feature, such as a river, may be the crucial point of reference. Therefore, West Pulworthy in the parish of Highampton, is located to the west of the Pulworthy Brook, whilst East Pulworthy is 1 km to the north-east, to the east of the brook and in the separate parish of Hatherleigh (a parish outside of the local study area). For the purposes of this study, where such occurrences are deemed not to denote linked farmsteads, settlements have been allocated to the appropriate type, whether hamlet or large isolated farmstead.

Where 'Higher' and 'Lower' occur, it is also tempting to think of the former as being on the site of the original settlement, although there is no evidence that this was always or commonly the case, and indeed the process of dispersal may in many cases have led to two or more entirely new settlements. Sometimes, there is the use of Great and Little, whilst occasionally Nether, Inner and Old may be used (Herring 2011b, 290). That the same limited range of descriptors is employed in contexts across the entire local study area, in both counties, is interesting, particularly as in Cornwall they can be affixed to place-names which are otherwise Brittonic Celtic in origin. This may point to a relatively late date for settlement splitting and dispersal (see Chapter 9).

Post-medieval hamlets

A number of hamlets almost certainly have exclusively post-medieval origins. Several of the larger examples are known to have origins connected with the mining or quarrying industries, such as Darite in St Cleer, which was initially established in the 1840s to house railway workers and quickly expanded to serve the Caradon mining complex (Figure 5.12). The settlement consisted almost exclusively of terraced cottages in streets aligned parallel to the nearby railway tracks.

One of the largest post-medieval settlement complexes was that of Pensilva–Middlehill, in the Cornish parish of St Ive (Figure 5.13). Houses in Pensilva were arranged along two east–west aligned roads, with four further lanes leading southwards to form Middlehill. According to the census records, in 1841 there was only one farm at Pensilva (then called Bodminland) and a cottage at Middlehill. Cottages were put up by speculative builders in the 19th century who then sold or rented them to miners, resulting in the distinctive grid pattern exhibited by the two settlements (Gillard 2004).

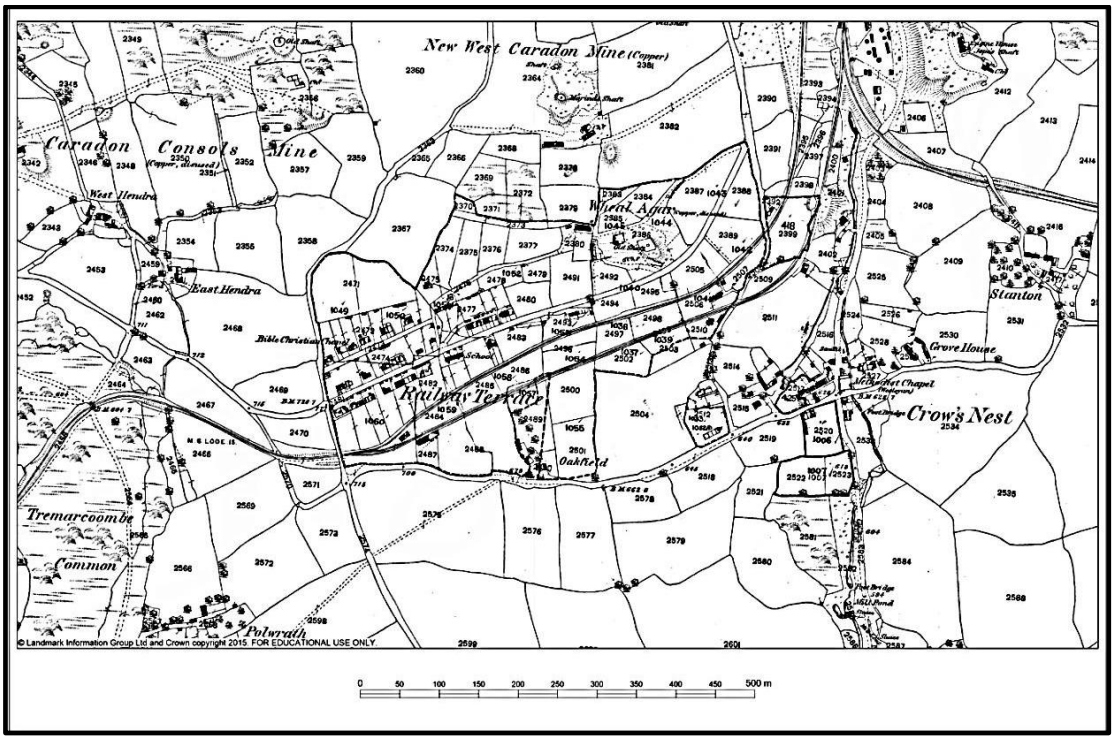


Figure 5.12: Darite in the Cornish parish of St Cleer. Originally simply called Railway Terrace, the hamlet was built for railway workers and subsequently expanded to house miners following the rapid growth of the copper mining industry from the 1840s onwards. (Digimap: Twenty-five Inch to One Mile OS 1883).

There were many other small hamlets, located either at convenient staging points on main roads, at prominent crossroads or clustered around inns, which would seem to have had their origins in the late 18th or 19th centuries. Crossroads are a common location for small post-medieval hamlets, and these settlements will also have some level of service provision, often a public house or inn. As its name suggests, Five Lanes was located at a prominent road junction a short distance to the south of Altarnun, on the main Launceston–Bodmin road (Figure 5.14). The Kings Head public house is fairly prominent, close to the junction itself and dating to the early 17th century.

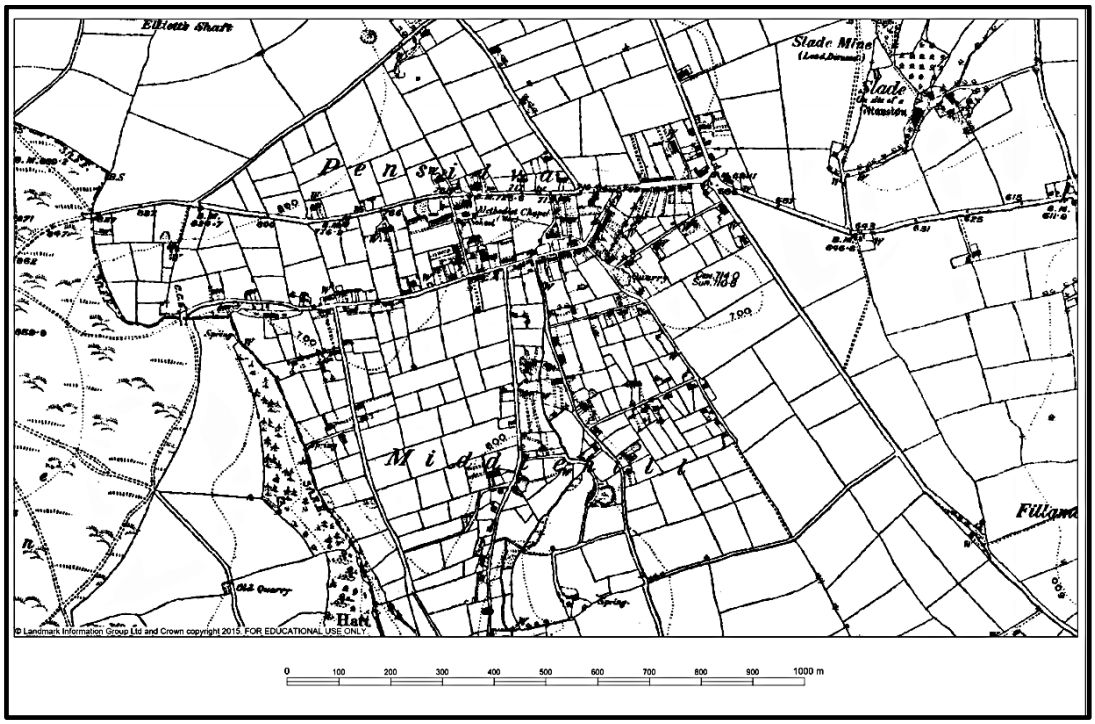


Figure 5.13: The large post-medieval settlements of Pensilva and Middlehill, in the parish of St Ive, Cornwall. Their origins as mining settlements can be seen in the grid pattern of roads and regular house plots. The majority were constructed by speculative builders, although some were built and managed by the mining companies. (Digimap: Six Inch to One Mile OS 1888).

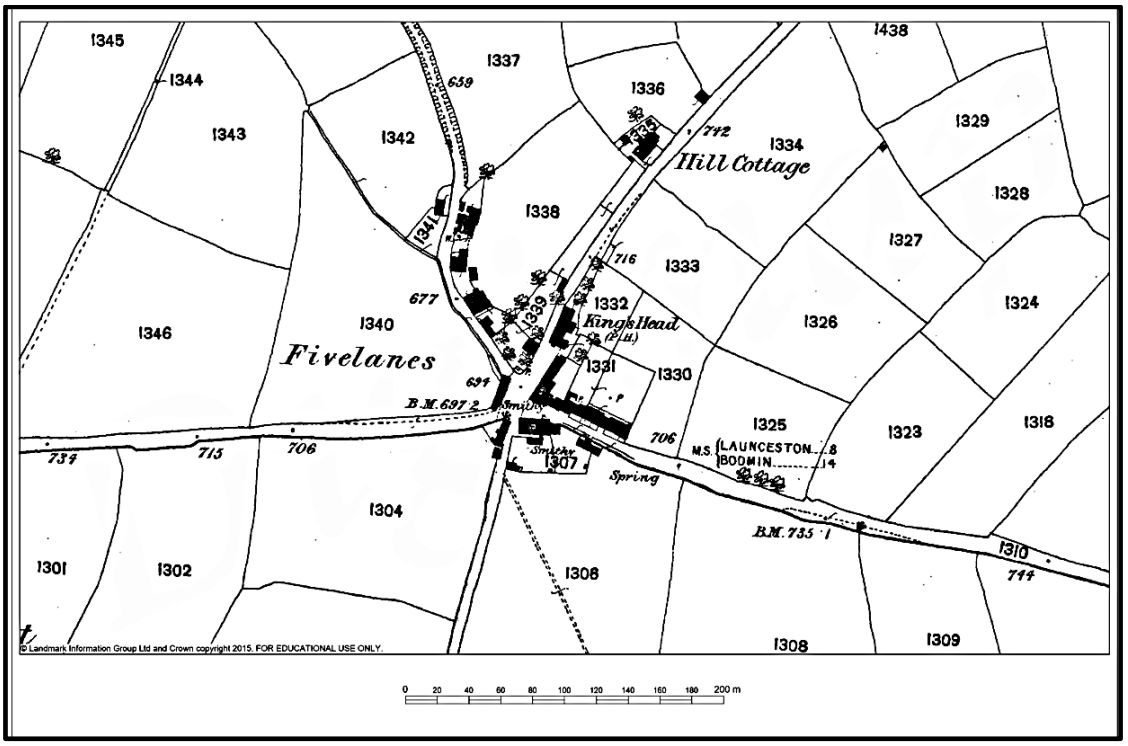


Figure 5.14: Fivelanes in the parish of Altarnun, Cornwall. As the name suggests, the hamlet was located at a major intersection on the main Launceston to Bodmin road, just before it crossed Bodmin Moor from the east, with a lane leading northwards to Altarnun. (Digimap: Twenty-five Inch to One Mile OS 1883).

Large Isolated Farmsteads

Large isolated farmsteads were the most numerous form of settlement within the local study area. For the purposes of this study, only fairly substantial farm complexes were included, with smaller farms and rural dwellings relegated to the category of small isolated farmsteads. They may take a variety of forms. Some of the larger examples consisted of extensive complexes of associated agricultural buildings, arranged around enclosed farmyards, often with a house, barns and sheds. Bokenna, in the parish of St Cleer follows the typical pattern, with a rectangular farmyard plus an outer yard and buildings (Figure 5.15). Some farms were specifically identified on the OS maps as bartons, particularly in Devon. The term was often used to mean the home farm of a manor (Ekwall 1960, 28-9), although by the 19th century it had become more widely used to signify any large farm. Such farm complexes may reflect greater investment in agricultural buildings in the 19th century, with some farms being completely rebuilt at that time.

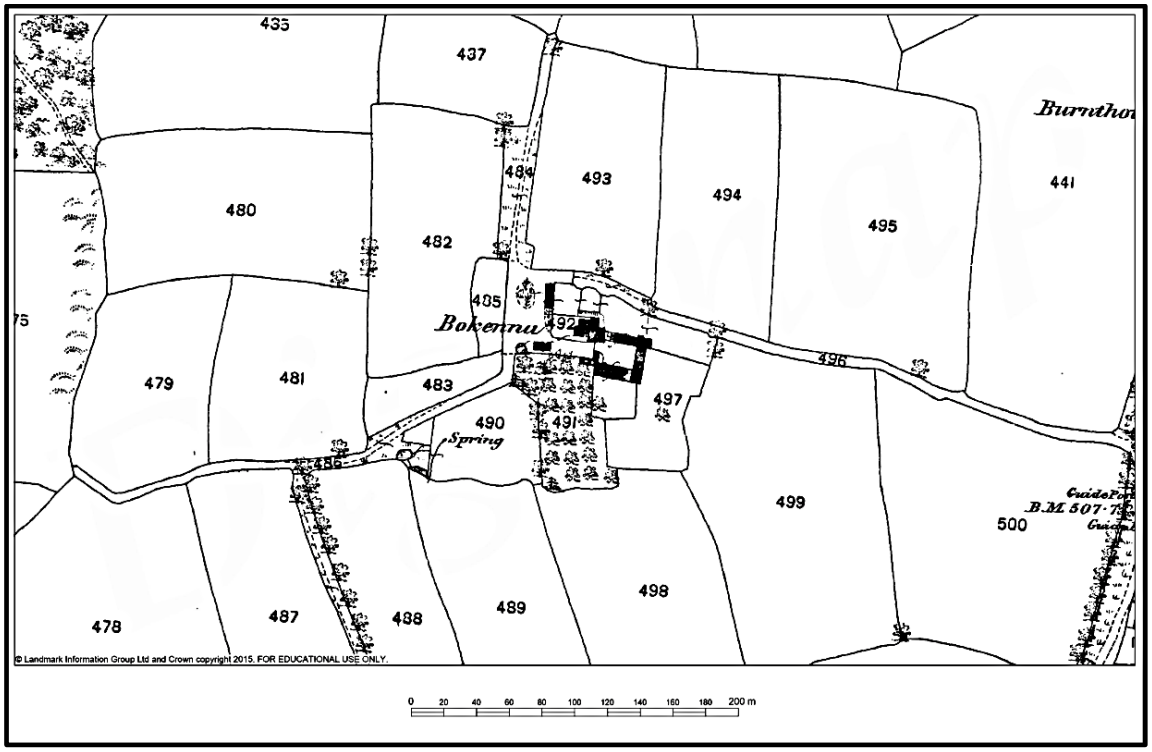


Figure 5.15: The large isolated farmstead of Bokenna in St Cleer, Cornwall, showing contiguous ranges of farm buildings arranged around a central, largely enclosed courtyard. (Digimap: Twenty-five Inch to One Mile OS 1882).

Other large isolated farmsteads display a more open arrangement of buildings around one or more farmyards, suggesting more organic growth over time, or that they had not been re-built/re-planned. The farm at Prewley, in the Devon parish of Sourton on the north-western fringes of Dartmoor, exhibited just such an open arrangement, with several buildings located around and partially within the main yard (Figure 5.16).

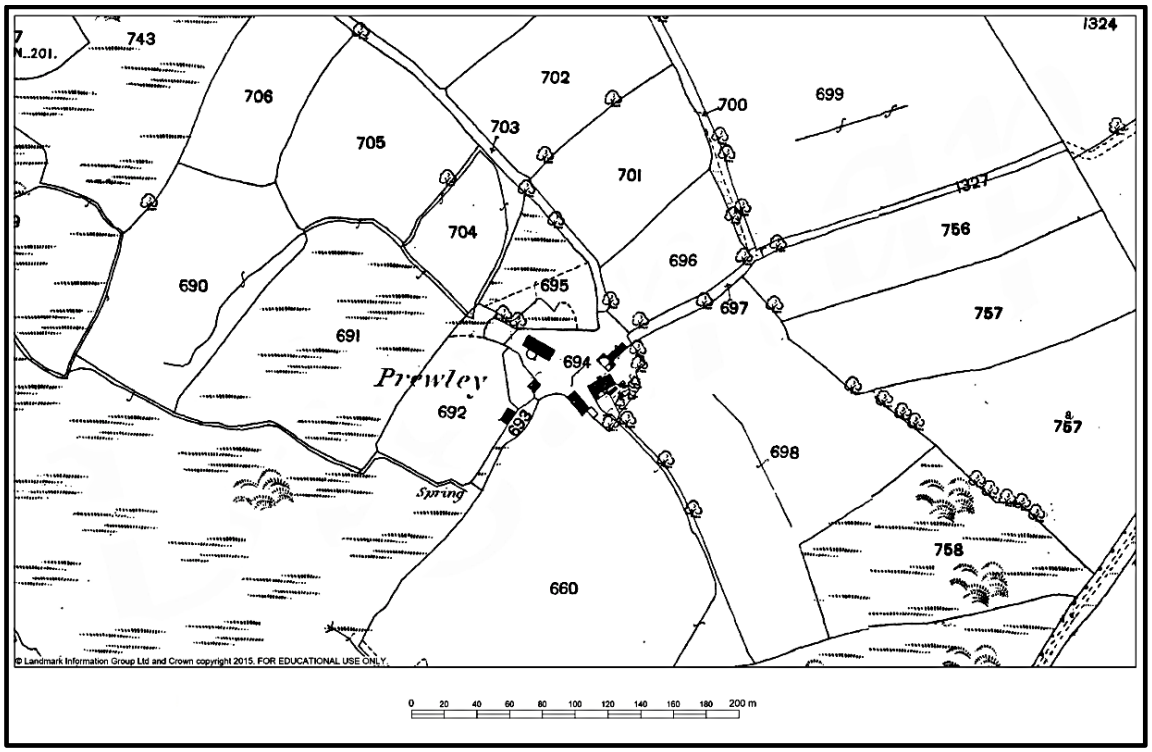


Figure 5.16: The large isolated farmstead of Prewley, Sourton, Devon, on the fringes of Dartmoor had a more open arrangement of buildings around a farmyard, suggesting a more organic development. (Digimap: Twenty-five Inch to One Mile OS 1885).

Small isolated farmsteads and dwellings

This category consisted of a range of smaller farmsteads and buildings, with settlements mainly distinguished from large isolated farmsteads on the basis of size. In some cases, they consisted of a small collection of farm buildings, but more often they comprised a single dwelling. Small isolated farmsteads tended to be in more secluded locations. Many will have been linked to moorland activities, such as livestock pasturing, turf cutting or small-scale mining and quarrying. Westmoorgate, for example, was located on moorland to the south-west of Altarnun, between Trewint Downs and Hendra Downs (Figure 5.17) and appears to consist of a barn and two outbuildings.

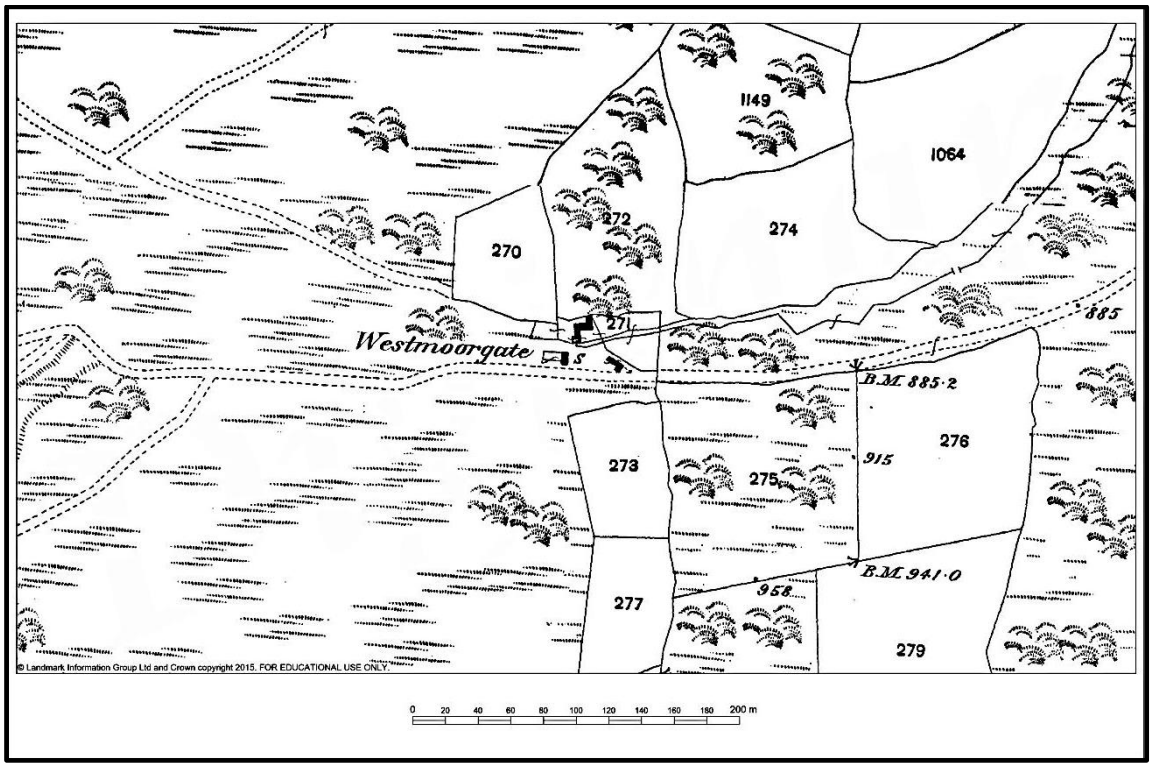


Figure 5.17: The small isolated farmstead of Westmoorgate in Altarnun parish, was comprised of a small collection of buildings located on a track leading up on to Bodmin Moor. (Digimap: Twenty-five Inch to One Mile OS 1883).

Miscellaneous Buildings

Several other types of settlement/building were listed for the sake of completeness, but were not analysed further as they were considered to contribute little to the key issues of agricultural settlement nucleation and dispersal. There were a fair number of mills represented on the 19th-century OS maps, for example, and many are likely to have originated in the late medieval or early post-medieval periods. As a specialised building type, their presence and distribution can reveal some important information on the economy of the later Middle Ages but they are not directly relevant to the issue of overall settlement nucleation.

Similarly, several large country houses were present within the local study area. Their very presence in the landscape will have exerted a powerful influence on their immediate environs, but many owe their size and grandeur to wealth derived from trade and commerce in the 18th and 19th centuries, and most will have been more humble manor houses in the late medieval period. Located just

to the north of Launceston on the River Ottery, for example, Werrington Park has at its centre a large early- to mid- 18th-century house, set within a landscaped park, having replaced a smaller medieval house (Figure 5.18). Construction of the later house and parkland, the latter fairly extensive, modified the landscape quite considerably, obliterating much of the original demesne land (Finberg 1969a, 106).

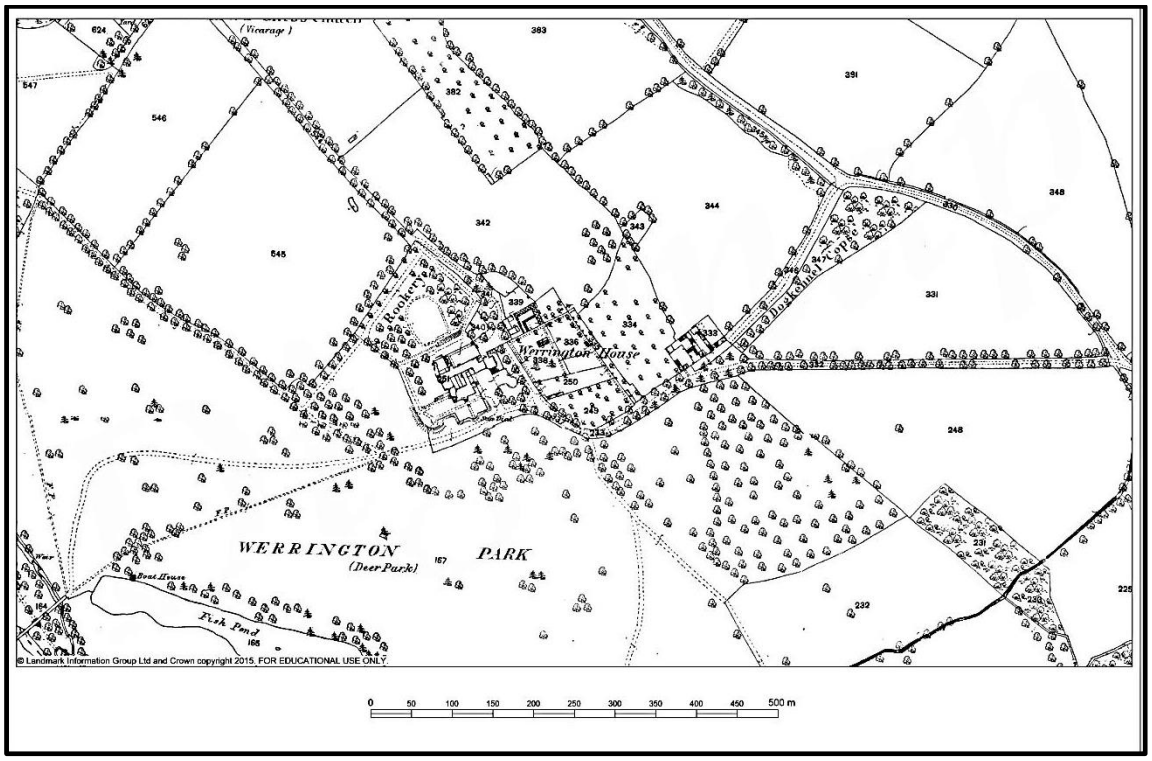


Figure 5.18: Werrington House, in the parish of Werrington to the north of Launceston, was enlarged and remodelled in the first half of the 18th century. A previous house on the site had been bought by the Drake family in 1620. (Digimap: Twenty-five Inch to One Mile OS 1884).

The 19th-century OS maps also mark the positions both of individual cottages and also rows of cottages, which were almost certainly of 18th- and 19th-century date. In addition, many isolated chapels are also marked, reflecting the growth of non-conformist religion, particularly Methodism, in the mid- and late-18th century. None of these building types were assessed further.

The Distribution of Settlement

Typology

With settlement types defined, the next stage was to plot their separate distributions on plans of the local study area, albeit with some preliminary amalgamations. Villages and developed churchtowns, for example, were relatively large centres of rural population in the 19th century, and it therefore seemed sensible to combine them with large-sized hamlets. The remaining churchtowns would have had very small residential populations and, by the same token, were combined with the small-sized hamlet group.

Plotting was facilitated by use of the 19th-century First Edition Six Inch to One Mile OS maps, to allow accurate positioning of settlements, with each indicated by a coloured dot. The OS maps themselves were not included in the resulting distribution plots. This procedure was undertaken for the majority of settlement types individually and also for the particular combination of large- and medium-sized hamlets. Also illustrated are small-sized hamlets, linked farmsteads, large isolated farmsteads and small isolated farmsteads. Because this exercise was the first stage in reconstructing rural settlement patterns in the late medieval and post-medieval periods (see Chapter 6) some 'cleaning' of data has taken place; removing known later post-medieval settlements (such as mining towns) was undertaken. In terms of output, each distribution plot is illustrated in the relevant section below, with some background information to put them into context, including the coastline of the South West Peninsula, the major rivers and basic topography, with the moorland, heath and late enclosure also indicated oin a single shapefile. Each also has the boundary of the local study area marked in red.

The numbers of each settlement type in each parish are summarised in Tables 5.1 and 5.2.

Large- and medium-sized hamlets (Figures 5.19, 5.20 and 5.21, Tables 5.1 and 5.2)

Individual plots were created for both large- and medium-sized hamlets, with a third plot combining the two types. For large-sized hamlets, the densest patterning was seen on the west side of the Tamar, and in particular along the course of the River Lynher, through the parishes of North Hill, Linkinhorne and Calstock, and in the adjacent lower lying ground to the south-east, in the area bounded by the rivers Lynher, Inny and Tamar (Figure 5.19). Therefore, North Hill had two large-sized hamlets, Linkinhorne had five and Calstock nine, with a number of adjacent Cornish parishes each having one, two or three. These include St Dominick, with three, and South Hill, with one, on the southern edge of the main cluster, and Stoke Climsland, Lewannick and Altarnun, all with three, along the northern edge (Table 5.1). In the parish of Calstock, the hamlets of Metherell, Latchley, Chilsworthy and Albaston were all particularly large settlements.

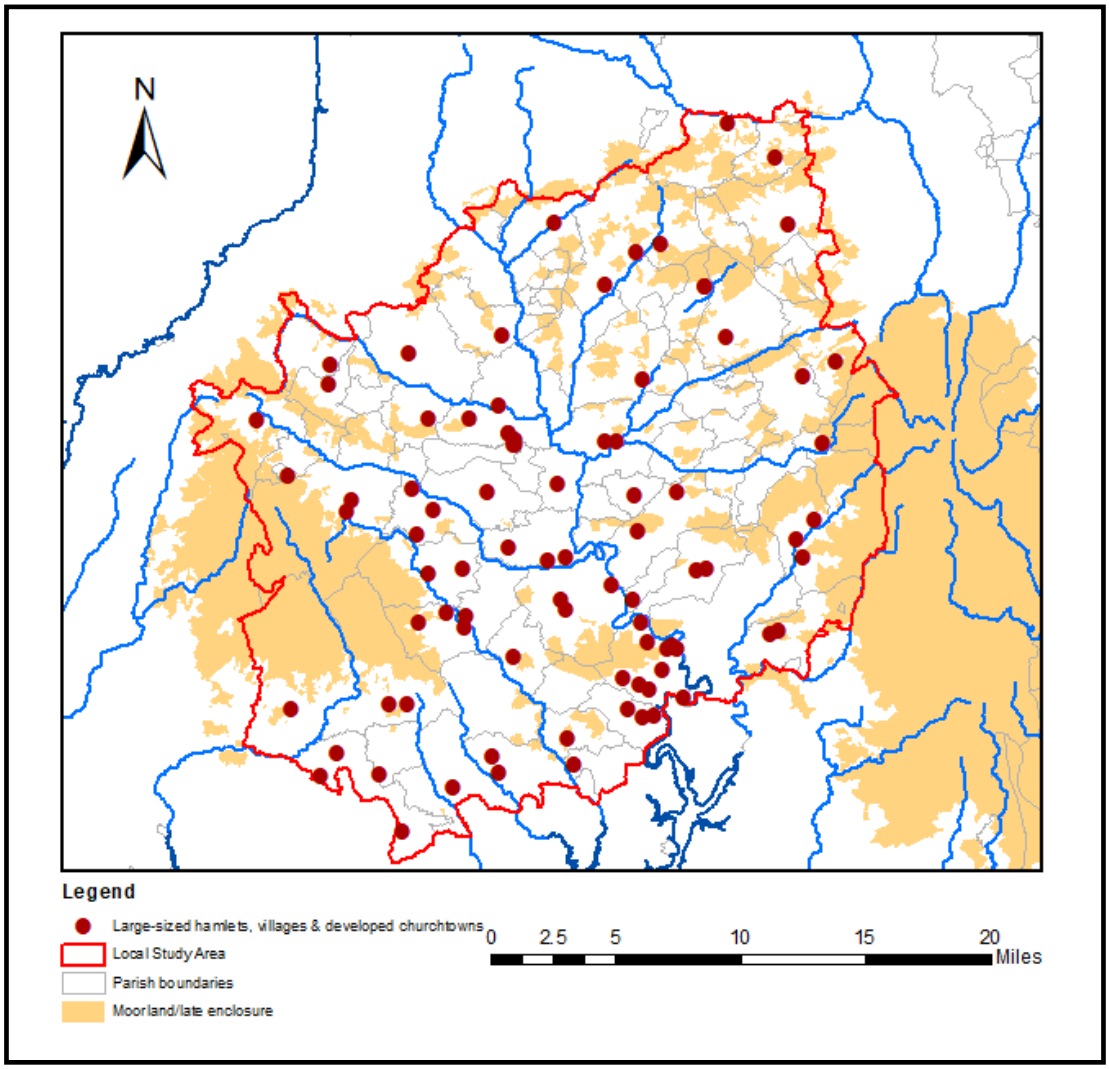


Figure 5.19: The distribution of large-sized hamlets within the local study area. The densest concentration was along the River Lynher and to the south-east, in the parish of Calstock. (ArcMap Extract).

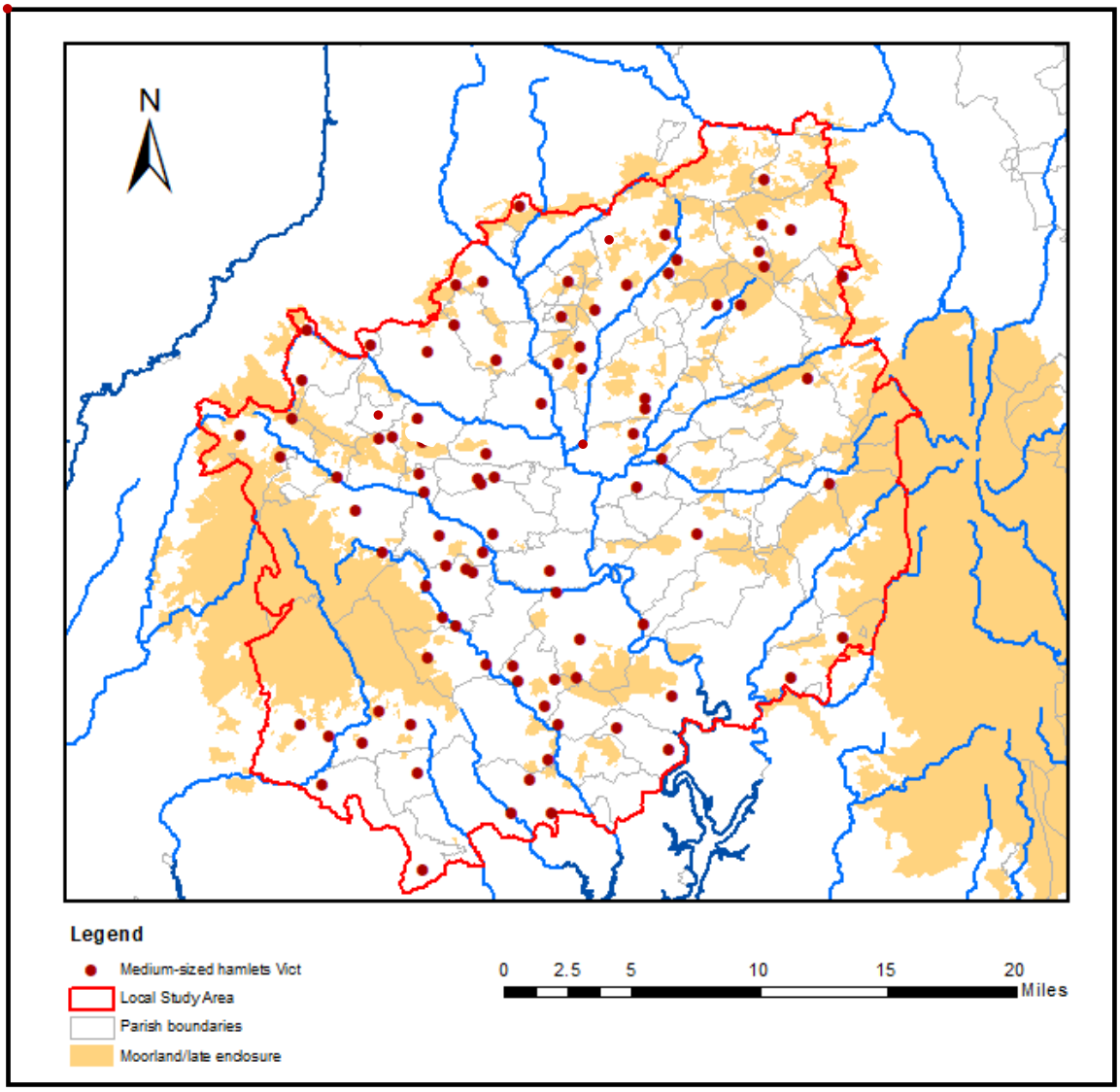


Figure 5.20: The distribution of medium-sized hamlets, with higher densities of settlement to the west of the River Tamar. (ArcMap Extract).

When medium-sized hamlets were plotted, these same areas also showed high concentrations of nucleated settlement, that is parishes through which the River Lynher runs and in the south-east Cornish lowlands (Figure 5.20). Therefore, Lezant had three medium-sized hamlets, Stoke Climsland had two, South Hill had four, North Hill had five, St Dominick had two, and Calstock had one (Table 5.1). The area in which medium-sized hamlets seem to have dominated extends beyond that seen for large-sized hamlets, however, with relatively high

concentrations between the rivers Inny and Ottery, and north of the Ottery extending into North Petherwin and Boyton. Milton Abbot, on the east side of the Tamar, had two medium-sized hamlets, whilst there was another noticeable concentration in the Devon parishes of Northlew and Beaworthy, in the north-east corner of the local study area, each with two medium-sized hamlets.

A plot showing both large- and medium-sized hamlets was also prepared, as the two groups encompassed most settlement of any size within the local study area, with the obvious exception of the main towns (Figure 5.21). This third distribution map makes clearer the greater concentration of nucleated settlement in the area to the west of the River Tamar, in contrast to the much sparser pattern seen to the east of the river. Therefore, there was a moderate density of large/medium hamlets in the area between the rivers Ottery and Inny, continuing northwards across the River Ottery into North Petherwin. The remaining northern Cornish parishes bordering the Tamar, north of the Ottery, had fewer large/medium hamlets. The Cornish parishes along the south side of Bodmin Moor displayed a moderate density of large/medium-sized hamlets, particularly in Quethiock, Menheniot, Liskeard, and the southern portion of St Ive. In contrast, the central and southern parts of Bodmin Moor were largely devoid of large/medium-sized hamlets, although St Neot and St Cleer, with much of their territory on the southern part of the moor, did have three and six such hamlets respectively.

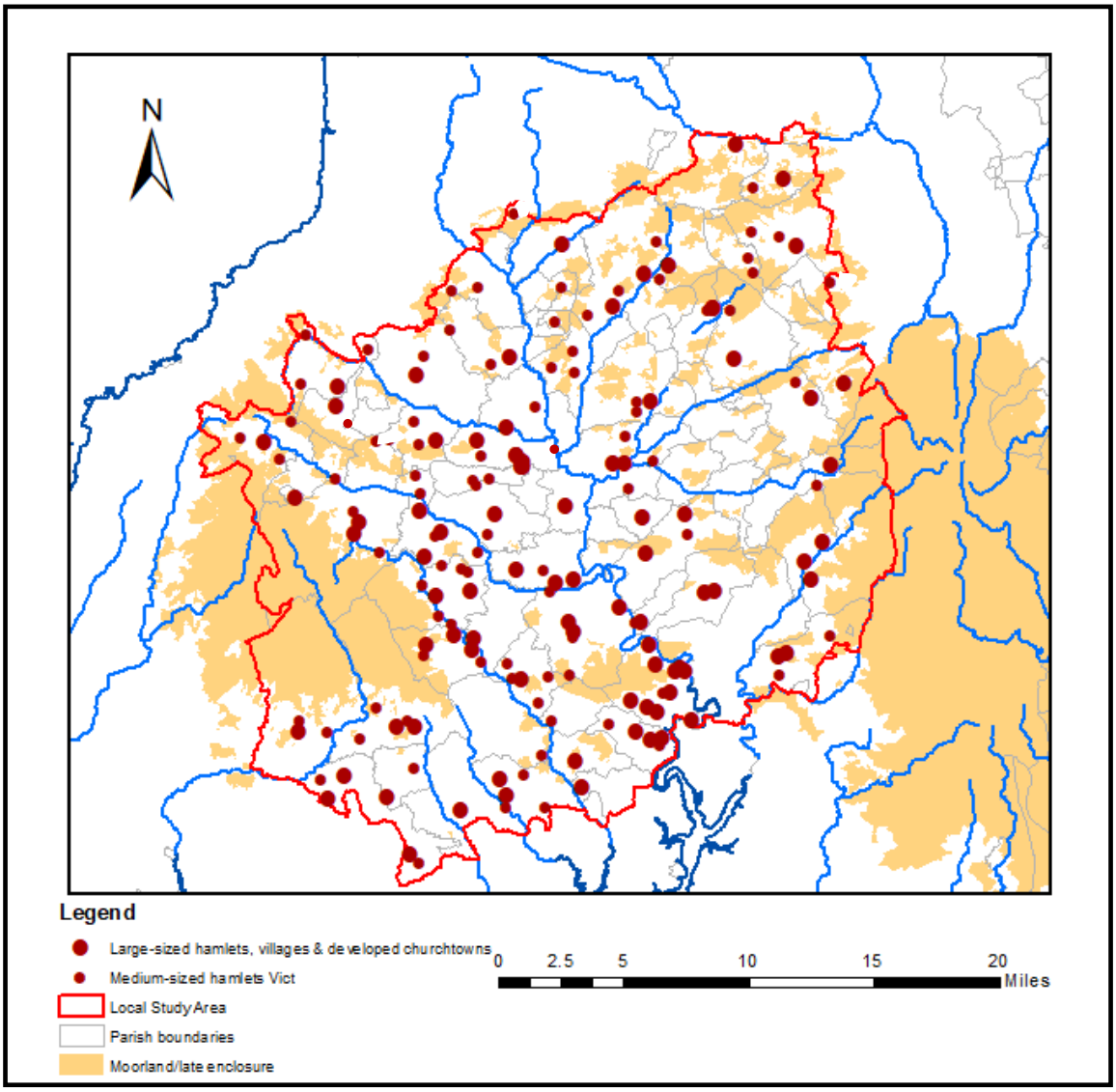


Figure 5.21: Large- and medium-sized hamlets plotted together, emphasising the large number of settlements along the River Lynher and in south eastern Cornwall. Fewer large- and medium-sized hamlets were located to the east of the River Tamar, although there was a noticeable concentration in Northlew, in the north eastern part of the study area. (ArcMap Extract).

Turning our attention to Devon, the density of large/medium hamlets in parishes to the east of the Tamar was seen to be generally quite low, although there was a slight concentration around the rivers Claw, Carey and Wolf in the north. In Tetcott, on the upper Tamar, there were three medium-sized hamlets but no large-sized hamlets. In the small parishes on the east bank of the Tamar, Kelly, Bradstone and Dunterton had one large-sized hamlet between them, Meadwell. In the middle and lower reaches of the Tamar, the relatively high density pattern of large/medium hamlets seen on the Cornish side of the river was not

continued into the adjacent Devon parishes of Tavistock, Whitchurch and Lamerton. Therefore, Tavistock had no hamlets of any size, whilst Whitchurch had two large-sized hamlets – Whitchurch itself and Middlemoor – and two medium-sized hamlets. Apart from Lamerton itself there was only one other settlement of any size in this particular parish, at nearby Lamerton Green.

Small-sized hamlets (Figure 5.22)

Small-sized hamlets followed a more even distribution pattern than was seen with the larger settlements, although there was a slightly greater concentration to the west side of the Tamar and to the south of the River Ottery. This was particularly the case in those parishes along the courses of the rivers Inny and Lynher, with slightly greater numbers in the Cornish parishes of Altarnun, North Hill, Lewannick and Linkinhorne. There was a scattering of small-sized hamlets across other parishes on the west side of the Tamar, although they were largely absent from central Bodmin Moor. There was a much more dispersed pattern to the east of the Tamar, although there was some limited clustering in the south Devon parishes of Tavistock and Sydenham Damerel, and across some of the very northern parishes, particularly Clawton, Tetcott, Ashwater and Black Torrington.

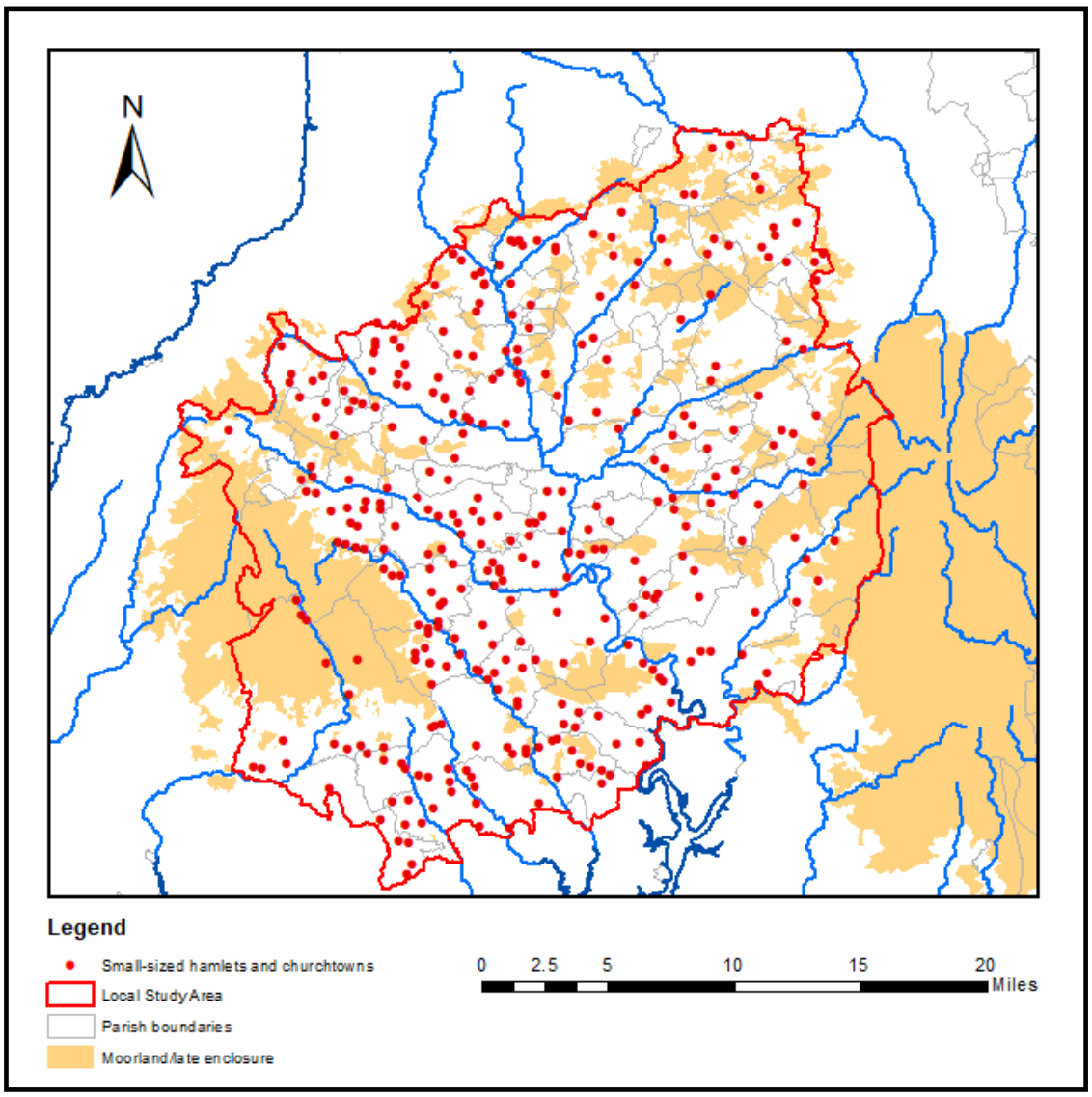


Figure 5.22: The distribution of small-sized hamlets within the local study area. As with large- and medium-sized hamlets, the greatest concentration was to the west of the River Tamar, associated with the rivers Lynher and Inny. (ArcMap Extract).

Linked farmsteads (Figure 5.23)

Linked farmsteads were plotted by taking a central point between the component settlements. They could be found across most of the local study area, though with some noticeable concentrations, particularly on the southern and south-eastern edges of Bodmin Moor. There were eleven in the parish of St Neot and nine in the adjoining parish of St Cleer, both parishes on the southern edge of the moor, with Liskeard, immediately to the south, containing another seven. On the eastern flanks of Bodmin Moor, Linkinhorne also had nine, with the adjoining parish of Stoke Climsland having a further seven. In Devon, the

greatest number was found in Whitchurch, on the western fringes of Dartmoor, with seven dispersed hamlets, though they were otherwise fairly sparsely distributed.

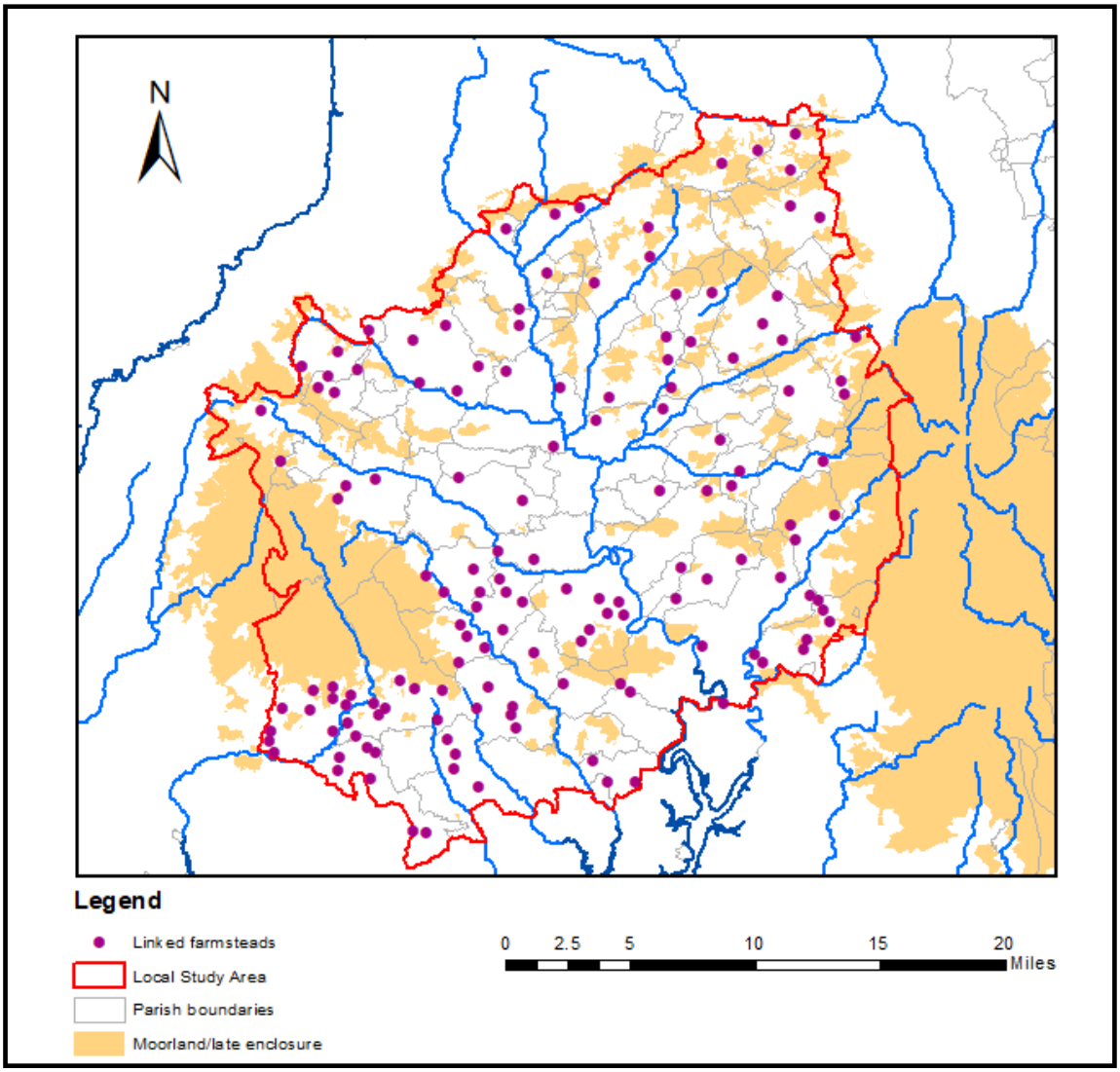


Figure 5.23: The distribution of linked farmsteads within the local study area. Although found throughout the area, there was a noticeable group on the southern edge of Bodmin Moor, in the parishes of St Neot, St Cleer and Liskeard. (ArcMap Extract).

Large isolated farmsteads (Figure 5.24)

Large isolated farmsteads were spread throughout most of the local study area, although with some less dense areas, particularly in those parishes taking in the higher levels of Bodmin Moor and the western fringes of Dartmoor. Noticeable gaps in Cornwall included much of the parish of Altarnun, the northern parts of

St Neot and St Cleer, and the western parts of North Hill and Linkinhorne, all being moorland fringe areas. In the south-east Cornish parishes, numbers were relatively low in Calstock and around the town of Callington, as they were to north of the River Ottery, in North Petherwin (Tables 5.1 and 5.2).

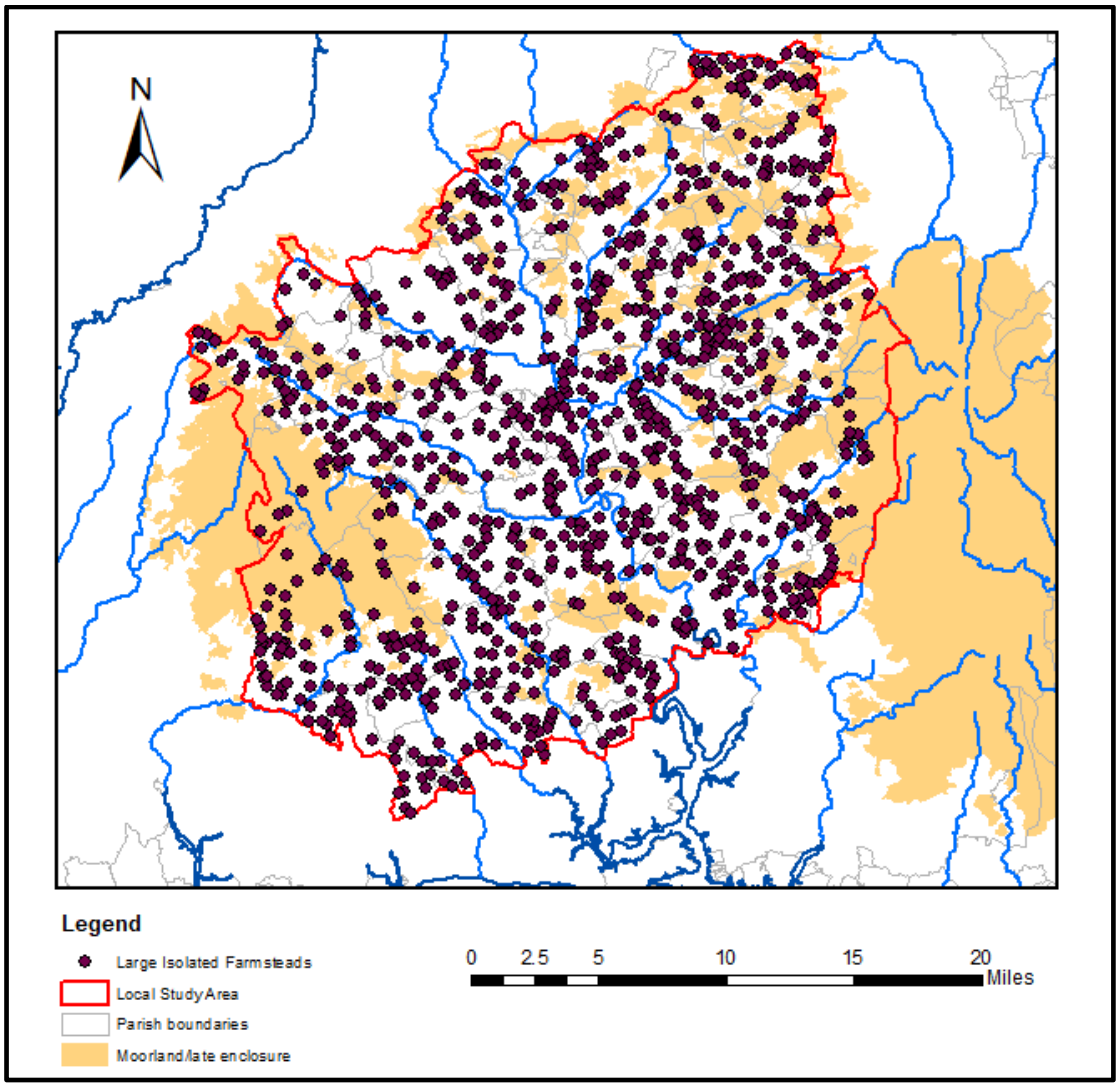


Figure 5.24: The distribution of large isolated farmsteads was fairly even across the entire local study area, except for gaps in the central and southern parts of Bodmin Moor and on Dartmoor, above the 300m contour. (ArcMap Extract).

Large isolated farmsteads were also present in large numbers to the east of the Tamar, except on the Dartmoor fringe, in the parishes of Peter Tavy, Mary Tavy and Lydford, and in the north, at the junction of the parishes of Ashwater, Halwill and Black Torrington. The densest concentrations of large isolated farmsteads in Devon were along the River Carey, in the parishes of Lifton,

Broadwoodwidger and Virginstow, and along the River Thrushel, particularly in Thrushelton, Stowford and Lifton.

Small isolated farmsteads (Figure 5.25)

This category included a number of different types of settlement which were otherwise indistinguishable on the 19th-century OS maps. It is suggested, however, that a large number will have been small holdings, often reliant on more marginal activities on the uplands of Bodmin Moor and Dartmoor. It is therefore unsurprising that the densest concentrations were seen across Bodmin Moor, where many may have been associated with such activities as livestock pasturing, turf cutting, mining or stone quarrying. Dartmoor, in contrast, has a greater extent of open moorland above the 300m level, where there would be less opportunity for permanent settlement of any description.

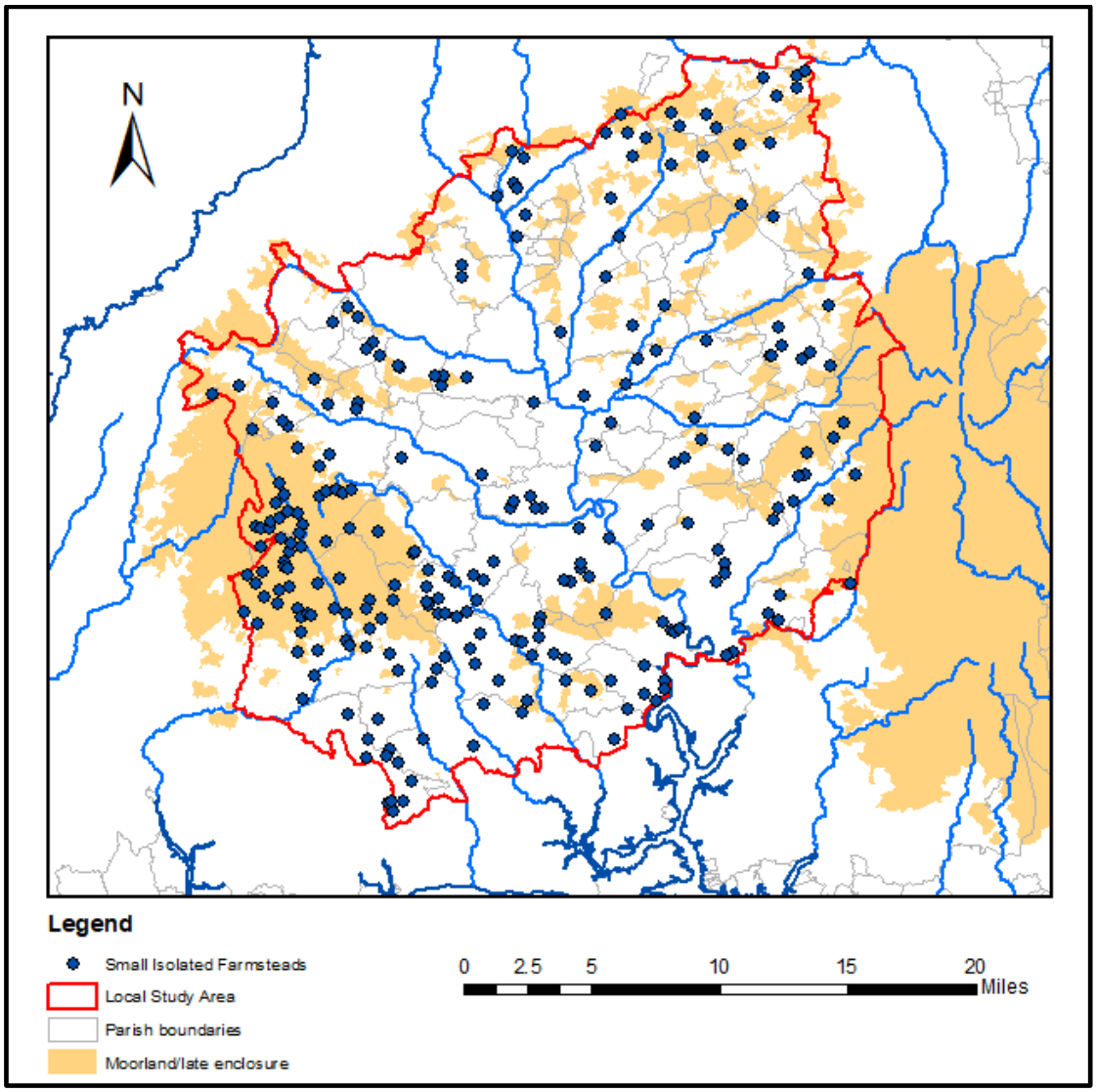


Figure 5.25: The distribution of small isolated farmsteads, showing the greatest concentration to be across Bodmin Moor. (ArcMap Extract).

Typology of Settlement Patterns

Introduction

The production of point dispersal maps is useful in pointing to certain patterns in settlement distribution, but the drawback in this approach is that it deals with each settlement type in isolation. The next step was therefore to devise a system that would combine and summarise this information in a meaningful way. To this end, every parish was entered into an excel spreadsheet, with a column for each settlement type, recording their total numbers against each parish. Based on this data, the parishes were then assigned to one of several

defined parish types (Tables 5.1 and 5.2), which will be described below, and a summary plan produced (Figure 5.26).

It was recognised quite early on that the point distribution plots had indicated two slightly different settlement patterns, both of which would have to be taken into account in the compilation of the parish typology and summary map. Particularly noticeable was the concentration of large- and medium-sized hamlets in certain Cornish parishes, pointing to a tendency towards some settlement nucleation in western parts of the local study area. The second pattern noted was the propensity for overall settlement in some parishes to be very dispersed, with very many large isolated farmsteads, whether or not there were also some nucleated settlements present. Various alternative statistical methods of grouping the settlement numbers in each parish were tried, in an attempt take into account these two phenomena and also to reflect the visual patterning seen on the point distribution plans. These included trying to adjust for parish size, which was ultimately rejected as an approach as many of the larger parishes were also those with the greatest extent of moorland.

A straightforward statistical approach was therefore felt to be most appropriate, and one which could then be applied in the reconstruction of medieval settlement patterns presented in Chapter 6. The approach adopted uses the relative numbers of different settlement types within each parish, thereby also overcoming the difficulty of taking into account parish size. Small isolated farmsteads were not included, as the category covers a wide variety of buildings. For simplification, some settlement categories were amalgamated. Villages and developed churchtowns were combined with large-sized hamlets, and churchtowns and linked farmsteads with the small-sized hamlets. Towns were not included in this analysis.

Identification of relative settlement nucleation was the principal objective of this exercise, with a comparison made between weighted numbers of hamlets against total number of all selected settlement types, including large isolated farmsteads. Each settlement within a parish was therefore given a score, with greater weighting given to larger settlements. Therefore, large-sized hamlets

were each given a score of 5, medium-sized settlements a score of 3, and small-sized hamlets a score of 1. The combined totals of all the hamlets for each parish were then recorded in a new column in the parish excel spreadsheet to give an overall hamlet score. Large isolated farmsteads were also each given a score of 1 and combined with the hamlet score to give an overall total. For each parish, the total hamlet score was then expressed as a simple percentage of the total score; the higher the percentage the greater the degree of settlement nucleation within that parish (because of the greater dominance of the larger settlements). Parishes were then ranked from the highest percentage at the top to the lowest percentage at the bottom. Boundary markers were then inserted in the table to allow allocation of parishes into seven types (Tables 5.1 and 5.2), which were as follows:

Type A (Very high settlement nucleation)

This type consisted of parishes where there were a significant number of large/medium-sized hamlets, with relatively few large-isolated farmsteads, based on a score of 75% or above (Table 5.1; Figure 5.26). Nine parishes fell within this type, seven in Cornwall and two in Devon, though the latter two, Tetcott and St Giles-on-the-Heath, are located on the east bank of the River Tamar. Tetcott is also one of the smallest parishes, with the general absence of large isolated farmsteads perhaps artificially pushing up the percentage figure. Warbstow, Trewen, Treneglos and Tresmeer are all small parishes along the northern edge of Bodmin Moor, and so similar factors may have been at work. Calstock, with an impressive nine large-sized hamlets, is also included within this type.

Type B (High settlement nucleation)

Parishes allocated to Type B had a score of between 65% and 74%, and were again dominated by parishes to the west of the Tamar, with eight of the eleven situated in Cornwall (Table 5.1; Figure 5.26). The most significant grouping comprises the Cornish parishes of Lewannick, North Hill, Linkinhorne, South Hill and Lezant, between and along the rivers Inny and Lynher. St Stephen, on the north side of Launceston, the adjoining smaller parish of Egloskerry, on the south side of the River Ottery, and North Petherwin, on the opposite north bank, are also included within this type. To the east of the Tamar, Sydenham Damerel

and Clawton lie adjacent to the river. It is noticeable that this type more closely matches the point distribution pattern of large- and medium-sized hamlets.

Type C (Moderate settlement nucleation)

With nucleated settlement at between 55% and 64%, Type C parishes were again predominately located to the west of the River Tamar, with seven of a total of eleven parishes within this type (Table 5.1; Figure 5.26). South Petherwin, Callington, St Dominick, Altarnun and St Cleer extend the reach of Type 1 and 2 parishes to the west, south and east, with Boyton adjacent to North Petherwin to the north. The small Devon parish of Dunterton lies on the east bank of the Tamar. It is interesting that the remaining three Devon parishes allocated to this type are located in a cluster in the north-east corner of the local study area – being Halwill and Highampton – on more settled, lower lying ground to the south of the River Torridge.

Type D (Moderate settlement dispersal)

A total of sixteen parishes scored between 45% and 54%, now with a preponderance to the east of the Tamar (Table 5.1; Figure 5.26). The nine Devon parishes included within this type are found scattered across the eastern half of the local study area, from Kelly and Luffincott adjacent to the Tamar, to Ashwater and Beaworthy in the northern part, Bridestowe on the western Dartmoor fringe, and Milton Abbot and Whitchurch in the south. Those parishes included to the west of the Tamar tend to be more peripheral to the more nucleated groups described above, with Liskeard, Menheniot and Pillaton, in the south, and North Tamerton, in the north. Werrington, on the north side of Launceston, and Stoke Climsland, are confirmed as having low settlement nucleation.

Type E (High settlement dispersal)

The twelve parishes comprising Type E have a slightly greater preponderance to the east of the River Tamar, with seven in Devon and five in Cornwall, with settlement density at between 35% and 45% (Table 5.1; Figure 5.26). For Cornwall, Davidstow, St Clether and Tremaine are parishes on the northern edge of Bodmin Moor, with St Neot a large parish on the southern edge, the latter with quite extensive tracts of moorland. Of the Devon parishes within this

group, there is again no overall patterning, with Broadwoodwidger and Bratton Clovelly on the high ground of Broadbury Ridges, Lifton, Marystow and Lamerton in the central-southern portion of the Devon half of the local study area, and Sourton and Peter Tavy on the western Dartmoor fringe.

Type F (Very high settlement dispersal)

This type represents those parishes exhibiting the most dispersed settlement patterns, being dominated by parishes to the east of the River Tamar, with scores of 34% or less (Table 5.1; Figure 5.26). Black Torrington, Virginstow and Ashbury lie scattered in the northern half of the local study area, with the remainder to the south of the River Thrushel, particularly the small parishes of Coryton, Stowford, Lewtrenchard and Thrushelton. Tavistock, at 14%, is located close to the bottom of this type. The one Cornish parish included, St Ive, is located to the south-east of Bodmin Moor, where settlement nucleation does tend to be lower.

Type G (Wholly urban)

St Mary Magdalene, Launceston, was the only parish within the local study area which was wholly urban (Table 5.1; Figure 5.26).

Table 5.1: Parishes grouped according to weighted proportion of settlements in the 19th century, Types A-C (Settlement columns list actual numbers of settlements, whilst total columns are based on the following applied weightings: large-sized hamlets [LSH] weighted 5; medium-sized hamlets [MSH] 3; small-sized hamlets [SSH] and linked farmsteads [LF] 1; large isolated farmsteads [LIF] 1).

Parish	County	LSH	MSH	SSH	LF	LIF	Ham Tot	Tot	%	Type
Tetcott	Devon	0	3	2	1	2	12	14	86	A
Warbstow	Cornwall	1	3	5	4	4	23	27	85	A
Trewen	Cornwall	1	2	0	0	2	11	13	85	A
Treneglos	Cornwall	1	0	3	3	2	11	13	85	A
Calstock	Cornwall	9	1	8	2	15	58	73	79	A
St Thomas	Cornwall	2	3	2	0	6	21	27	78	A
Tresmeer	Cornwall	1	0	2	0	2	7	9	78	A
St Giles on the Heath	Devon	1	3	2	0	5	16	21	76	A
St Mellion	Cornwall	1	0	7	0	4	12	16	75	A
Lezant	Cornwall	2	3	11	2	11	32	43	74	B
Sydenham Damerel	Devon	1	1	5	1	5	14	19	74	B
North Hill	Cornwall	2	5	12	4	15	41	56	73	B
Linkinhorne	Cornwall	5	2	12	9	20	52	72	72	B
St Stephen	Cornwall	4	2	2	1	13	29	42	69	B
Lewannick	Cornwall	3	2	4	0	12	25	37	68	B
Mary Tavy	Devon	2	0	1	3	7	14	21	67	B
North Petherwin	Cornwall	1	1	16	5	14	29	43	67	B
Egloskerry	Cornwall	1	3	2	0	8	16	24	67	B
Clawton	Devon	1	2	8	2	11	21	32	66	B
South Hill	Cornwall	1	4	8	1	14	26	40	65	B
South Petherwin	Cornwall	1	2	12	2	14	25	39	64	C
Callington	Cornwall	0	1	5	1	6	9	15	60	C
Halwill	Devon	1	2	1	0	8	12	20	60	C
Highampton	Devon	1	1	2	2	9	12	21	57	C
St Dominick	Cornwall	3	2	4	0	18	25	43	58	C
Quethiock	Cornwall	2	2	6	0	16	22	38	58	C
Altarnun	Cornwall	3	2	13	3	28	37	65	57	C
St Cleer	Cornwall	2	4	7	9	30	38	68	56	C
Dunterton	Devon	0	0	4	0	4	4	8	50	C
Boyton	Cornwall	1	2	4	2	13	17	30	57	C
Lydford	Devon	1	0	1	0	5	6	11	55	C

Table 5.2: Parishes grouped according to weighted proportion of settlements in the 19th century, Types D-G. (Settlement columns list actual numbers of settlements, whilst total columns are based on the following applied weightings: large-sized hamlets [LSH] weighted 5; medium-sized hamlets [MSH] 3; small-sized hamlets [SSH] and linked farmsteads [LF] 1; large isolated farmsteads [LIF] 1).

Parish	County	LSH	MSH	SSH	LF	LIF	Ham Tot	Tot	%	Type
Liskeard	Devon	4	2	11	7	37	44	81	54	D
Werrington	Cornwall	1	1	9	2	16	19	35	54	D
Kelly	Devon	1	0	2	1	7	8	15	53	D
Pillaton	Cornwall	1	0	2	3	9	10	19	53	D
Ashwater	Devon	2	2	5	2	21	23	44	52	D
Stoke Climsland	Cornwall	3	2	7	7	32	35	67	52	D
Bridestowe	Devon	1	1	4	1	13	13	26	50	D
Germansweek	Devon	1	1	0	1	9	9	18	50	D
Luffincott	Devon	0	0	2	0	2	2	4	50	D
Menheniot	Cornwall	1	0	12	4	21	21	42	50	D
Milton Abbot	Devon	2	2	3	1	20	20	40	50	D
Whitchurch	Devon	2	2	0	7	24	23	47	49	D
North Tamerton	Cornwall	0	2	9	1	17	16	33	48	D
Laneast	Cornwall	1	0	1	0	7	6	13	46	D
Beaworthy	Devon	0	2	3	0	11	9	20	45	D
Northlew	Devon	1	2	7	2	25	20	45	44	E
St Neot	Cornwall	1	2	9	11	40	31	71	44	E
Davidstow	Cornwall	1	3	1	1	21	16	37	43	E
St Clether	Cornwall	0	1	3	1	10	7	17	41	E
Lamerton	Devon	2	0	6	3	28	19	47	40	E
Lifton	Devon	2	2	1	1	27	18	45	40	E
Broadwoodwidger	Devon	1	2	4	4	30	19	49	39	E
Sourton	Devon	0	0	5	4	15	9	24	38	E
Marystow	Devon	0	0	4	1	8	5	13	38	E
Tremaine	Cornwall	0	0	3	0	5	3	8	38	E
Bratton Clovelly	Devon	1	1	4	4	30	16	46	35	E
Lawhitton	Cornwall	1	0	4	0	17	9	26	35	E
St Ive	Cornwall	0	0	6	5	22	11	33	33	F
Peter Tavy	Devon	1	1	1	1	23	11	33	30	F
Black Torrington	Devon	1	0	6	2	30	13	43	30	F
Coryton	Devon	0	0	3	0	7	3	10	30	F
Stowford	Devon	0	1	1	1	12	5	17	29	F
Virginstow	Devon	0	0	2	0	5	2	7	29	F
Brentor	Devon	0	0	2	1	8	3	11	27	F
Ashbury	Devon	0	0	1	0	6	1	7	14	F
Bradstone	Devon	0	0	1	0	6	1	7	14	F
Tavistock	Devon	0	0	3	2	31	5	36	14	F
Thrushelton	Devon	0	0	3	0	25	3	28	11	F
Lewtrenchard	Devon	0	0	1	0	10	1	11	9	F
St Mary Magdalene	Cornwall	0	0	0	0	5	0	5	0	G

The Distribution of Parish Types

The spread of parish types based on their settlement composition is illustrated in Figure 5.26, with darker shading for those parishes exhibiting greater settlement nucleation (Types A & B), and increasingly lighter shading as settlement dispersion increases (Types C to F). Some very clear patterning can be seen, with, in broad terms, a preponderance of nucleated settlement to the west of the Tamar and more dispersed settlement to the east. Within the overall pattern, however, there was some variation which warrants further explanation / analysis.

If Types A and B are taken together – those parishes exhibiting a good number of nucleated settlements – it can be seen that there was a substantial block of such parishes running from the north Bodmin Moor parish of Warbstow, in the west, down through the eastern fringes of the moor to the lowlands on the west side of the middle Tamar, to include Lezant and Calstock. The River Lynher runs through the southern part of this group, through the middle of some of these parishes, such as North Hill and Linkinhorne, with also Egloskerry and North Petherwin to the north of the River Ottery. Tetcott, St-Giles-on-the-Heath and Sydenham Damerel, bordering the east bank of the Tamar, can be added to this group, but surrounding Devon parishes exhibited much more dispersed settlement patterns.

The parishes of St Stephen and St Thomas border the northern and western sides of the former Cornwall county town of Launceston, St Stephen being the original core of the town. Some settlement nucleation might, therefore, be expected in the hinterland of a major town, particularly as the main route into Cornwall crosses the Tamar to the east of Launceston, at Polson Bridge. As one of the larger parishes, Tavistock in fact has one of the most dispersed settlement patterns in the local study area, with no large- or medium-sized hamlets and only three small-sized hamlets, compared with thirty-six large isolated farmsteads. This, despite the town lying on the main road leading north from Plymouth to Okehampton and at the intersection of another road leading west across the Tamar to Callington. Surrounding parishes, including Lamerton, Brentor and Peter Tavy, also exhibited fairly dispersed settlement patterns,

although there were more nucleated settlements in Mary Tavy. It was therefore concluded that a different set of influences was at play in the formation of settlement patterns in south-west Devon to that on the corresponding Cornish side of the Tamar.

When one turns to the Culm Measures, which cover the northern part of the local study area, some further variations were observed. The Cornish parish of North Petherwin, for example, was quite nucleated in terms of settlement pattern, with Boyton, Halwill, Highampton and Beaworthy less so, all being in Type C. Most of the remaining parishes, going eastwards from the Tamar, exhibited much more dispersed settlement patterns, whether on the Culm Measures, such as the parish of Ashwater, or in the more fertile, undulating landscapes to the south, as was the case with the parishes of Lifton, Stowford and Thrushelton. The influence of late 19th-century developments on the settlement pattern, however, must not be ignored. Settlement in Halwill, for example, was influenced by the creation of Halwill Junction in the 1870s, a major rail junction on the Bude Branch Line and the North Cornwall Line.

Something should also be said of the parishes bordering the south side of Bodmin Moor, with St Ive and St Neot exhibiting quite dispersed settlement patterns, with higher concentrations in St Cleer, which was the local centre of the 19th-century copper mining industry. Although this might, to an extent, be expected, much of St Neot parish taking in quite large tracts of Bodmin Moor, this is in stark contrast to the larger parishes on the north and east sides of the moor – Altarnun, North Hill and Linkinhorne – which also take in extensive moorland. Some other explanation should therefore be sought for this observed pattern.

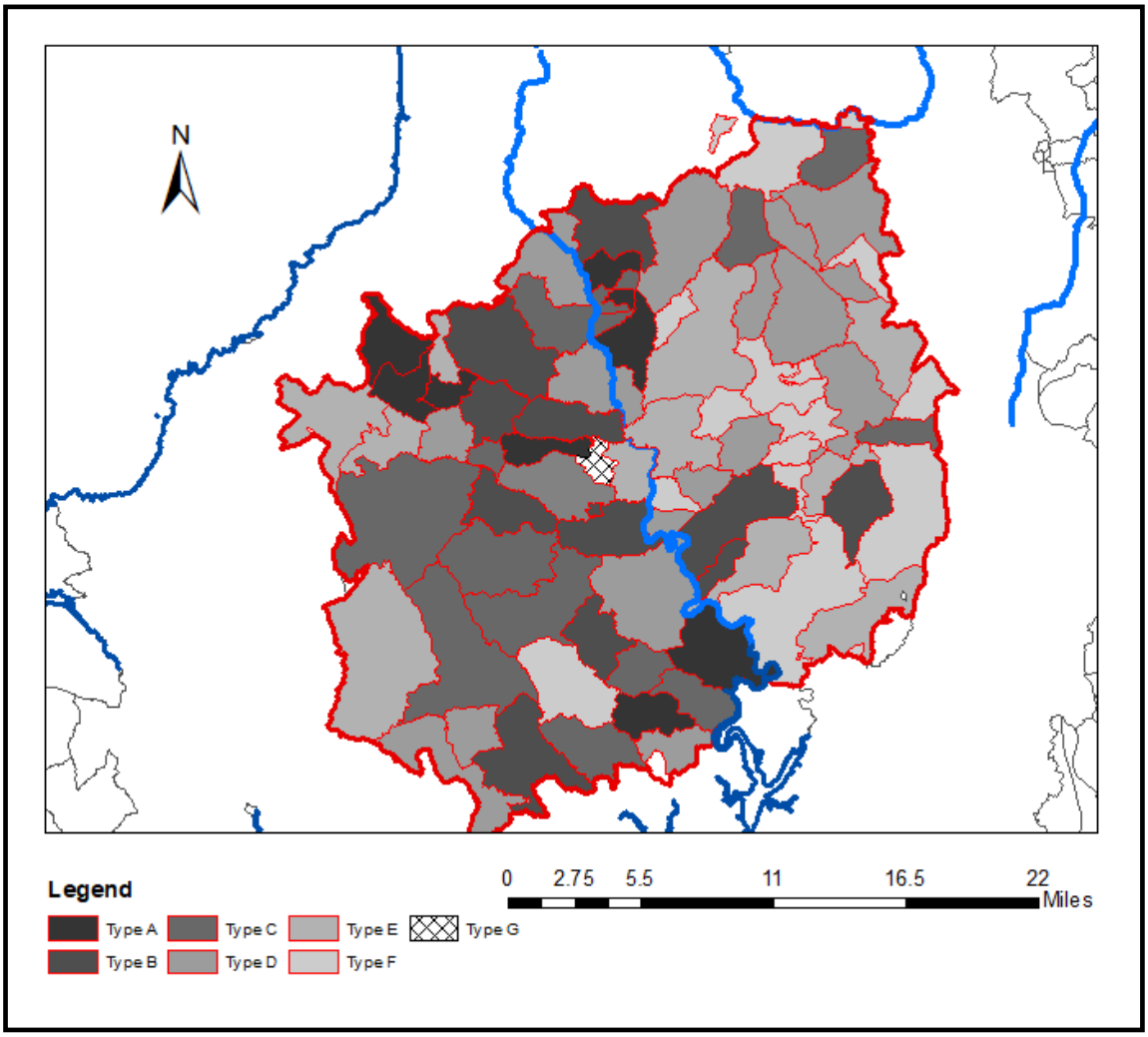


Figure 5.26: The distribution of settlement types within the local study area, based on numbers of nucleated settlements and general settlement dispersal. (ArcMap Extract).

Discussion

The objective of this chapter has been to characterise rural settlement within the local study area as it was in the late 19th century, as a stage in ultimately understanding medieval and early post-medieval rural settlement and landscape in east Cornwall and west Devon. It will be seen that although the landscapes to either side of the River Tamar are in essence mirror images of one another in terms of their physical character, there is not such a close correspondence with the settlement pattern in the 19th century. This is particularly evident when the larger classes of hamlet are considered together, quite clearly showing higher concentrations in a band of parishes to the west of

the Tamar, running down the north eastern fringes of Bodmin Moor into the more fertile lowlands to the south of Launceston. It has also been shown that the corresponding parishes to the east of the Tamar displayed a much more dispersed settlement pattern, with smaller numbers of large- and medium-sized hamlets, but with a similar number of small hamlets and farms scattered across the landscape. Interestingly, a mixed pattern is seen across the northern part of the local study area, where the heavy clay soils of the Culm Measures might otherwise be expected to produce uniform settlement patterns. What we actually find, however, is greater nucleation of settlement in some parishes, such as North Petherwin and Clawton, and quite dispersed patterns in others, such as North Tamerton and Ashwater.

It should be remembered, however, that what is being described is a modified picture of 19th-century settlement patterns, with mining and roadside settlements removed to leave the more established rural settlements. What has not been assessed so far is the extent to which this divergence may have taken place in the post-medieval period, either through changes in farming practice or as a result of the expansion in the mining industries from the late 1830s onwards. Certainly, some settlements owe their origins to this period, such as Darite and Pensilva, whilst others, including St Cleer and Henwood, were greatly expanded to house tin and copper miners. In terms of large isolated farmsteads, no distinction between overall size or the layout of buildings and courtyards has been made in the distribution plots, and this may prove a fruitful avenue for further research. Fewer, larger farms, for example, may point to greater investment in agriculture in the 18th or 19th centuries in the areas where they were present, perhaps contrasting with areas which were more reliant on the mining industry. The next step, however, is to assess the extent to which 19th-century rural settlement as represented on OS maps in any way reflects the settlement pattern of the late medieval period, and this will be explored in more detail in the next chapter.

6

Reconstructing Late Medieval Settlement Patterns and Morphology

Introduction

The previous chapter sought to characterise settlement patterns across east Cornwall and west Devon at a point in time when the landscape was being surveyed by the Ordnance Survey, in the second half of the 19th century. The results pointed to greater nucleation of settlement across a section of east Cornwall at that time than was seen in corresponding areas to the east of the River Tamar, with moderate settlement nucleation across the Culm Measures. This was, however, only the first step in a process whereby it was hoped to go some way to reconstruct settlement patterns in the late medieval and early post-medieval periods.

For this second stage, additional sources of data will be drawn upon, with the object of testing how far the 19th-century maps reflect the late medieval and early post-medieval landscapes and providing a basis for assessing variation in settlement patterns across the local study area. This will principally be achieved by undertaking a map regression of the local study area, starting with the 19th-century OS maps and the analysis of settlement patterns undertaken in Chapter 5. As will become clear, underlying this procedure is the premise that across the South West there were processes of settlement contraction and dispersal taking place from the late 13th or 14th century onwards, with the contraction of small hamlets into single farmsteads, the splitting up of hamlets to leave a network of isolated farms, and the loss of some settlement altogether. This chapter will

therefore examine what evidence there is to support these claims and to map any variation that there may be across the local study area.

The first part of the chapter provides a summary of documentary and archaeological evidence for settlement patterns and vernacular architecture in the South West in the medieval and early post-medieval periods. In particular, this draws on the wealth of material available from survey and fieldwork undertaken on deserted medieval settlements across Bodmin Moor, Dartmoor and other moorland and marginal locations, pointing to general trends of settlement loss and contraction in the region. The next step was to identify a range of possible types of evidence which could potentially be applied directly to the later map evidence to identify where settlement contraction may have occurred. This includes documentary evidence, use of place-names and archaeological and earthwork evidence, monument surveys, aerial photographs and, more recently, use of LiDAR, applied to settlement morphology as represented on 19th-century OS maps. A range of techniques was developed which were then applied to each settlement within the local study area, whereby each was reassessed for evidence of the loss of tenements and for general contraction.

The same range of settlement types employed in Chapter 5 was used in this exercise. Although an interpretative process, the original size of each settlement was estimated and where different from the 19th-century situation, potentially re-allocated to a different settlement type. The distributions of the various settlement types were then examined in the same way as was undertaken with 19th-century settlement patterns in Chapter 5, starting with point distribution plots and leading to the production of a map of parishes shaded according to relative settlement nucleation in the later Middle Ages. Variation in settlement nucleation across the local study area was then assessed as well as the extent of change from the 19th century.

Medieval Settlement in the South West

Settlement patterns

The starting point for a survey of medieval rural settlement in the South West would inevitably be Domesday Book, where 331 names are given for Cornwall and over 1,000 for Devon, though it has been pointed out that names refer to manors and vills rather than to individual settlements (Thorn and Thorn 1979). In Cornwall, many places retain Brittonic place-names to this day, with a *tre*-prefix believed to denote early farming estates (Padel 1985, 223-32). Thought to have their origins in the 6th – 9th centuries, at least 1,300 such settlements are known in Cornwall (Preston-Jones and Rose 1986, 145-6; Figures 6.1 and 9.6). Whilst there is an almost total absence of place-names in *tre*- in Devon, the Old English equivalent *-ton* may simply represent the renaming of existing farming estates in areas of West Saxon settlement, or at least areas of English cultural influence (Preston-Jones and Rose 1986, 142).

Preston-Jones and Rose's (1986) analysis of the distribution of settlements in *tre*- in Davidstow parish (within the local study area), on the northern edge of Bodmin Moor, and Padstow and St Merryn, on the north coast lowlands of Cornwall, pointed to a regular distribution of *tre*-settlements along valley sides. Hamlets in the Inny Valley are sited about half a mile apart, for example, often paired on opposite sides of the valley, a possible indication of planned settlement (Preston-Jones and Rose 1986, 143-5; Figure 2.4). It was also hypothesised that there would have been a standard amount of arable to each settlement, with equal access to valley bottoms for further resources, such as timber, fish and reeds, and to upland grazing. Turner (2006a) proposed that 'estates' associated with these settlements typically comprised around 50 ha (125 acres) of agricultural land supporting four to five households, each with approximately 30 acres of mixed farming land. This has been compared with early medieval territorial organisations in Wales, where the *tref* or *villa* of 3 *modii*, around 120 acres (Davies 1978, 34; 1982, 42), is consistent with the size of medieval farms in the Padstow area, which were generally 100-120 acres in extent (Preston-Jones and Rose 1986, 143). Settlements in *tre*- may therefore

be comparable to the ancient Irish townland, a block of farmland supporting a settlement (Evans 1957, 28; Glassie 1982; Aalen 1997; Herring 1999).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 6.1: Selected archaeological remains and place-name elements in East Cornwall. The top right plan shows the distribution of tre- *place-names, with* -tun *in the bottom left plan and* -cote *and* -worthy *in the bottom right. (From Preston-Jones and Rose 1986, Fig 3, 140).*

Settlement size

Some idea of the typical size and layout of a medieval hamlet in the South West may be gauged from surveyed and excavated examples from upland locations. This evidence should, however, be approached with caution. Many such settlements proved to have a restricted lifespan, being in more 'marginal' locations, and they might not directly mirror the circumstances of lowland settlements in more established areas. Of the deserted medieval settlements on Bodmin Moor, for example, most are hamlets with four to six houses, typically the longhouse or cross passage type, often with ancillary buildings and garden plots, and are usually associated with discrete field systems.

Brown Willy, on Bodmin Moor, for example, would seem to have started with three or four longhouses, later expanding to six (Herring 2006b; Figure 6.2). Of the sites excavated by Minter on Dartmoor, Hound Tor I consisted of four stone longhouses and seven subsidiary dwellings and outbuildings within an irregular network of yards, closes and trackways, enclosing 0.6 ha. (Figure 2.6). Associated with this was a field system and about 30 ha. of rough ground (Beresford 1979, 151). From the main phase, the four largest buildings were longhouses in which livestock was housed at the opposite ends to the living accommodation (Beresford and Hurst 1971, 112). The settlement probably consisted of four farming units, as confirmed by four separate barns for crop-processing and storage, each with a corn drying kiln and oven. There is evidence for arable cultivation and the associated field systems have strip lynchets, which would suggest that they were subdivided between the tenants (Turner 2007). Hound Tor II nearby is a small farmstead within a walled enclosure, with a longhouse and a small corn drying barn (Henderson and Wedell 1994, 124-5).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 6.2: Plan of the medieval longhouse hamlet at Brown Willy, Bodmin Moor, showing all longhouses and associated buildings. The longhouses are part-stippled, to show the living areas with, in each case, an 'S' indicating the relevant shippon. The earliest farmsteads were believed to be the three on the east side (From Herring 1986, fig.61).

Hutholes comprises three stone-built longhouses and three ancillary buildings, with the largest, House 3, about 14.5m in length when measured internally. The settlement may possibly be identified with the lost settlement of South Rowden (Linehan 1965, 171) and was re-excavated by Exeter Museums Archaeological Field Unit (EMAFU) in 1994 (Henderson and Weddell 1994, 120-3). Dinna Clerks was a solitary longhouse destroyed by fire, with pottery vessels and other objects sealed beneath demolition debris. Study of pottery from all four excavations would suggest that most were established after the middle of the 13th century and abandoned by the middle of the 15th century (Allan 1994, 142-5).

On Dartmoor, some deserted settlements were at quite high altitudes, for example Butterberry I in Peter Tavy, at 1,225 ft, which consisted of six

buildings, with crofts adjacent to two of the buildings, with three further buildings at Butterberry II (Linehan 1965, 66). Survey was also undertaken of seven sites in Okehampton Park, where there was a total of 35 longhouses identified, Site 5 being the largest, with 11 houses in three groups. The park was extended over them in the period 1216-1272, thus providing a 13th-century end date for the settlement (Linehan 1966, 126). Two longhouses were also excavated by EMAFU on Sourton Down, to the west of Okehampton Park, both buildings with a byre at one end (Henderson and Weddell 1994, 132-4).

A group of medieval settlements were excavated in the 1980s by EMAFU in the Wolf Valley, on the Culm Measures mid-way between the north-western edge of Dartmoor and the Tamar Valley and in advance of the construction of the Roadford Reservoir (all within the local study area). Five modern farms were found to be on the sites of medieval settlements, located a little above the valley bottoms, including Hennard Jefford and East and West Wortha Farms, Germansweek parish. Four medieval buildings were excavated at West Wortha, two of which were corn drying barns, and there is therefore likely to have been at least two farmsteads. The settlement is documented in 1320 but was probably an independent holding (Turton and Weddel 1988, 11, 15). At Lower Goodacre farm, Broadwoodwidger parish, documented in 1429 as East Goatacre, medieval pottery was found beneath the floor of the present farmhouse.

A number of farms and settlements were affected by the construction of Colliford Reservoir, Bodmin Moor (also within the local study area). These included the still occupied farms of Menaridden, Lower Gillhouse, Pinnockhill and Stuffle (all St Neot parish). Excavation revealed a series of small enclosures, closes and house platforms associated with West Colliford Farm (Griffith 1984, 119). At Stuffle, an excavated longhouse was associated with pottery dated 1250-1450, and at Stonaford, North Hill another long house was investigated within a standing building, comprising three rooms, consisting of a hall and inner room, a cross passage and a shippon at one end (Herring and Berry 1997).

Building form

To date, there has been little in the way of synthesis for vernacular buildings in the South West, although some interesting studies of building layout and form have been undertaken (Preston-Jones and Rose 1986; Cherry and Pevsner 1989; Chesher and Chesher 1968; Jope 1961). Standing medieval domestic buildings are rare in Cornwall, although they survive in large numbers in Devon, and to this has been added a small but significant number of excavated examples. From the early 13th century buildings were predominantly of stone or of cob (Herring and Berry 1997; Herring *et al* 2011b).

The standard rural house seems to have been of the rectangular longhouse variety. Longhouse types have been discussed by Austin (1985) and Herring (1986) and a cross passage would seem to have been the usual arrangement, dividing buildings into living rooms and byres, and can be two or three room types. There is some evidence for internal fittings, including stone hearths and benches in living areas and drains in byres, as was the case at Garrow Tor and Vendown (Dudley and Minter 1962-3; Dudley 1955-6), at Treworld and Lanyon (Dudley and Minter 1966; Minter 1965), and at Tresmorn, where the stone houses have no cross passages (Beresford 1971). There are possible longhouses at Trewitten and Treforda, Minster (Chesher and Chesher 1968, 26) and a handful of hall houses (Chesher and Chesher 1968, 27-37; Jope 1961), with extant buildings at Cullacott, in Stonaford (Figure 3.3), and Halbathick, in Liskeard (Herring and Berry 1997; Herring *et al* 2011b). There are also fragments of larger buildings at Hellesvean (Guthrie 1959-60) and Perran Sands (Penna 1968). Two longhouses were excavated at Bunnings Park, St Neot (Austin *et al* 1989, 54-62), and at Codda, in Altarnun, there was a post-medieval rebuild of a longhouse with a shippon at the lower end, reached via a through-passage (Herring and Thomas 2000). Excavation of another through-passage house at Mennabroom, in St Neot, also revealed a lower room (Thomas 1996).

The longhouse tradition seems to have been dying out by the 16th and 17th centuries, with one at Garrow Tor still in use in the 16th century (Dudley and

Minter 1962-3). In the early 17th century, Carew thought houses with a central hearth were old fashioned (Halliday 1969, 124) and many longhouses were converted to provide more domestic accommodation (Herring 1986). Cob was use for good quality late medieval houses in Devon, many of which survive intact, though generally with later additions and alterations (Hulland 1978, 1-2; Beacham 1980, 115), and in the lowlands are generally referred to as hall houses (Jope 1961; Laithwaite 1978).

Settlement Contraction and Loss

As discussed in the next section, there is now a wide body of evidence to show that by the early 14th century a majority of rural settlements in Cornwall and Devon were small hamlets rather than isolated farms (Beresford 1964; Fox 1989, 1991; Herring 2006, 50). With the modern rural landscape now dominated by stand-alone farms, there would appear to have been a trend from the late Middle Ages onwards for small hamlets, of generally two to four holdings, to contract over time, so that by the early post-medieval period many such hamlets had been reduced to the size of individual farms. In many cases, this may have been achieved by the constituent farms of a hamlet dispersing from the original settlement core, with the agricultural land of each townland redistributed and held in severalty (exclusive possession) by the new farms. Before looking specifically at the local study area, we will review what evidence there is for loss and contraction of settlements in the South West over this period.

Documentary Evidence for Settlement Contraction

Three important studies of medieval Cornwall that have used documentary evidence to point to settlement size and contraction are: Beresford's (1964) *Dispersed and Grouped Settlement in Medieval Cornwall*; Hatcher's (1970a) *Rural Economy and Society in the Duchy of Cornwall 1300-1500*; and Fox and Padel's (2000) *Cornish Lands of the Arundells of Lanherne*. All three studies provide good documentary evidence for the typical size of hamlets in the medieval period, with the latter two also providing evidence for settlement contraction. Harold Fox (1989a; 1991a) also looked wider at the question of

settlement contraction across the South West in some detail, drawing on a range of primary sources, including lay subsidy rolls and Duchy of Cornwall assession rolls.

As a preliminary, something should be said about the singular tenurial arrangements that existed in the South West in the later medieval period, in particular in Cornwall. Lords expected a townland or hamlet to yield an overall payment, with shares of rent worked out according to divisions of total land. Shareholding of land is also commonly mentioned in post-medieval documents relating to Devon (Herring 2006a, 54). The Duchy of Cornwall operated a system of conventionary tenure, whereby leases were put up for auction every seven years *en bloc* for each manor, in a process known as an 'assession'. This effectively became a free market in land (Hatcher 1970a, 56). The system would seem to have been instituted by the Earldom / Duchy of Cornwall but was also taken up by other landowners in the region, such as the Arundells (Fox and Padel 2000, lviii) and this is discussed in more detail in Chapter 9. There are also references to 10- and 20-year assessions in the 15th century on lands of Launceston Priory (Hull 1987, xxxix-xi).

In determining the typical size of a hamlet in the Middle Ages, Beresford (1964) examined the records of selected Duchy of Cornwall manors, Helstone in Trigg, Trematon and Tybeste, dating to the 13th and 14th centuries. The study was based on assession rolls, the earliest dating to 1356; the less detailed Caption of Seisin of 1337; and various other documents, including poll tax returns of 1377, 1379 and 1381. Of 203 separate messuages (dwelling, outbuildings and associated land) identified in this study, almost half were grouped as two dwellings, a number were grouped as three to five, with only one in eight consisting of more than five messuages together. The suggestion is that most consisted of between two and four tenements, though it is by no means certain that the constituent farms were actually physically grouped together to form hamlets (Beresford 1964, 177).

Looking at a selected group of Duchy of Cornwall manors (Climsland, Liskeard, Helston-in-Triggshire, Tybesta and Tywarnhaile), Hatcher (1970a) examined the

trend for a reduction in the number of tenants on estates over the period 1337-1504, implying that this reflected settlement contraction, which allowed some individuals to take on more than one holding. The study was based on the Caption of Seisin of 1337 and succeeding assession rolls, and Hatcher's statistics for the two manors within the local study area, Liskeard and Climsland, are summarised in Table 9.3. In the manor of Climsland, for example, whilst the total number of holdings leased remained relatively constant over this period, at around one hundred, the number of individuals holding more than one tenancy increased from six in 1356 to seventeen in 1504 (and from none in 1337). What is also interesting is that the Duchy seems to have preserved the extents of each of the original holdings throughout this period, and this phenomenon will be returned to in Chapter 10.

A similar pattern of the reduction in the number of tenants over time on many settlements can be seen with Fox and Padel's (2000) study of the estates of the Arundell family of Lanherne, covering the 14th to 16th centuries. These give detailed estate records at intervals of approximately every 20 years, providing information on individual tenants and rents for each township. From this, it is possible to follow the processes of engrossment, the adding together of holdings, that resulted in fewer tenants in many townships. The records also point to a high rate of turnover of tenants during the intervals between each survey, with little in the way of continuity of tenure, a fact which seems at variance with most modern perceptions of medieval farming communities. Whilst most of the Arundell lands were in mid- and west Cornwall, there were some holdings within the local study area, including for the manor of Downinney in Warbstow, with lands in Treneglos parish, and some tenements in Liskeard, belonging to the manor of Bodbrane in Duloe. For Devon, Finberg (1969a, 50) makes reference to Ogbear in the parish of Tavistock, divided between three tenants in 1409 but by only two in 1486.

With a high turnover of tenants, there was also the opportunity for some individuals to increase the size of their holdings, by amalgamation, as was evident from the Duchy of Cornwall records. This would mostly involve an existing tenant taking an extra holding, with the permission of the landlord,

leading to a reduction in the number of different tenants for many settlements whilst the total number of tenements again often remained the same. In the manor of Trembleath, in St Columb Minor between 1459 and 1480, for example, occupancies in the hamlet of Tregona fell from five to three, and in Engollan from three to two (Fox & Padel 2000, ciii), with two tenements in the latter being engrossed. In the hamlet of Treloy (St Columb Minor) there were four tenants in 1460 and only two in 1480. Shares were divided into sixths (reflecting the original number of tenancies), with one tenant by then holding a three-sixths share. It should also be borne in mind that this all took place at a point in time towards the end of a long period of agricultural decline starting in the 14th century (Fox and Padel 2000, cvi), which may point to some hamlets having been even larger in the High Middle Ages.

There is also good documentary evidence for the loss of whole settlements to desertion, for example in the case of Treayles in the manor of Trembleath, which by the time of the tithe apportionment in the middle of the 19th century had become two large fields, described as 'common' (Fox and Padel 2000, cviii). Finberg (1969a, 52) refers to the loss of two Tavistock parish hamlets in the 14th century, Crowndale and Dunscombe, and in north-east Cornwall the settlement of Grays in North Tamerton has completely disappeared (Herring and Thomas 1993, 19).

Settlement shrinkage and Place-name elements

A number of terms associated with settlements in the South West may just be suggestive of there once having been many more hamlets. For example, the common use of the term 'townplace' in earlier post-medieval documents to describe the central open part of a small hamlet, often used for communal grazing (in effect a village green), is also often applied to farmyards in later documents and also in popular literature. For example, a 1684 lease relating to the hamlet of Trevanson in the parish of St Breock, near Wadebridge, allowed the tenant 'liberty to keep pigs and geese on the town place or town floor' (Fox and Padel 2000, xci). Many examples in west Devon and Cornwall relating to farms which are known to have once been hamlets are recorded, for example Winscott in Pyworthy (Henderson and Weddell 1994, 132). From within the local

study area, Henderson and Weddell (1994, 132) refer to the cases of West Wortha, in Germansweek, and Wrixhill, in Bratton Clovelly. At Wrixhill reference is made to 'the cote and towne place of the same as enclosed is from the high way by the frith'. A brief survey of the local study area reveals the use of the term 'town' in a place-name in forty-eight instances, with twice as many in Devon as in Cornwall. This includes both large isolated farmsteads and small-sized hamlets, suggesting that the former were once larger settlements.

The second example of where place-names point to a change in settlement form, though not necessarily contraction, is where a group of settlements share a common name preceded by a descriptor (Higher, Lower etc), as described in more detail in Chapter 5. Therefore, Higher, Middle and Lower Quoditch in Ashwater was presumably a more compact hamlet at one time and was recorded under the single name Quidhiwis in 1249 (Gover *et al* 1931, 127).

Use of Morphological and Archaeological Evidence

Use of survey and excavation evidence to determine settlement size was used in this study in two ways. Firstly, analysis of deserted medieval settlements may provide a model for interpreting the morphology of other settlements, as represented on the later 19th-century OS maps. Although the majority of deserted settlements are located in what has traditionally been regarded as marginal land, the layouts thereby revealed can be useful in showing the internal layout of other such settlements in lowland areas. Secondly, there is some actual, albeit limited, physical evidence for settlement shrinkage identified from within the local study area, whether archaeological, from earthwork surveys, or from more remote techniques, such as geophysics or aerial photographs.

Most excavated settlements in the South West are quite small, generally with between two and six longhouses, and often with various outbuildings such as barns and corn drying ovens. With both Brown Willy and Hound Tor I, the longhouses were oriented with the slope, usually arranged so that the byre was downslope of the living accommodation and often including a drain running down the centre of the byre (Preston-Jones and Rose 1986, 146-50). In terms

of settlement layout, buildings tend to have been arranged around a central open area ('townplace'), with lanes or droveways running between each compound, radiating out from the settlement into the surrounding agricultural land or pasture. Individual tenements usually have enough space around them to allow for small enclosures, perhaps functioning as gardens, yards and paddocks. A number of such settlements have been identified within the local study area. Lamlavery on the northern part of Bodmin Moor, in Davidstow parish, consisted of four or five longhouses, with outbuildings, arranged around a central space and again all oriented with the slope (Johnson and Rose 1994). Trewortha, in North Hill, was larger, with a group of nine platform houses excavated (Baring-Gould 1892). This blueprint may then be used to compare with 19th-century settlement layouts as revealed by the 1:2500 OS maps.

There has also been some limited archaeological evidence from individual farms to indicate that they had once been larger settlements. Excavations carried out at a number of farms in advance of the creation of the Roadford Reservoir in the Wolf Valley in Devon found evidence that they had once been more extensive. At West Wortha farm, Germansweek, referred to above, remains of four buildings, including two medieval corn drying barns, were excavated, suggesting that there had been at least two farmsteads. The settlement is documented in 1320, and although in the mid-17th century there was only one house, there were actually still four separate landholdings and two tenants, illustrating the tendency for individual holdings to survive as separate parcels of land (Henderson and Weddell 1994, 131). There is also some evidence for lowland settlement shrinkage from within the local study area. In North Tamerton, for example, these included shrunken villages at Allisdon and North Heydon (Herring and Thomas 1993, 19).

Table 6.1: Selected Earthwork Evidence (Cornwall), from Cornwall Online Interactive Map.

Settlement (Parish)	**Location**	**Recorded Features**	**Settlement Type 19th Century (Medieval)**
Trebullett (Lezant)	SX 32347817	Earthworks to south and west of village green, possibly buildings and field boundary (Aerial photographs plotted as part of NMP).	Medium-sized hamlet (Medium-sized hamlet)
Mornick (South Hill)	SX 31837230 SX 3180 7222 SX 3187 7224	Earthworks located in three locations around village, including possible building platforms (Recorded by CAU).	Medium-sized (Large-sized)
Maders (South Hill)	SX 3443 7145	Earthworks and building platforms on eastern edge of settlement.	Medium-sized hamlet (Large-sized)
Hendawle (Davidstow)	SX 15589 86164	Earthworks are recorded to the north-east of the farmhouse. (Aerial photographs plotted as part of NMP).	Large Isolated Farmstead (Small-sized)
Trekelland (Lezant)	SX 34448048	Earthwork and building platforms at road junction (also indicated on Martyn's map of 1748).	Small-sized hamlet (Medium-sized)
Higher Trekelland (Lezant)	SX 34028042	Earthworks of former farm, also shown on Martyn's map of 1748 and 1803 OS.	Abandoned
Coldstick (South Hill)	SX 35778054	Earthworks of former farm, also shown on Martyn's map of 1748; shown as ruins on 1880 OS.	Large Isolated Farmstead (Small-sized)
Trekenner (Lezant)	SX 34267829	Earthworks and building platforms, some recorded on 1882 OS; two farm buildings may be longhouses.	Medium-sized hamlet
Higher Larrick (Lezant)	SX 3083 7840	Earthworks of building platforms, some shown on 1840 Tithe Apportionment	Linked Farmstead
Lower Larrick (Lezant)	SX 3096 7803	Barn, earthworks and possible building platforms south west of Lower Larrick; barn may be a long house.	Linked Farmstead
Trewarlett (Lezant)	SX 3381 7968	Building platforms of possible deserted settlement, south side of small stream and west of road.	Abandoned
South of West Penrest Farm (Lezant)	SX 3308 7774	Deserted farm buildings shown on Martyn's map of 1748.	Abandoned
Trecarrell (Lezant)	SX 31817837	Earthworks covered by orchard, recorded as shrunken settlement.	Large Isolated Farmstead (Small-sized Hamlet)
Greystone (Lezant)	SX 3625 7997	Earthworks of former buildings to west of present farmhouse.	Large Isolated Farmstead (Small-sized Hamlet)
Penrose Green (North Petherwin)	SX 2583 8923	Earthworks of possible building platforms located on Penrose Green, between Higher and Lower Penrose.	Large-sized Hamlet

A second approach has been to look for actual evidence for loss of buildings or tenements within or on the fringes of existing settlements. The source material can be quite varied, including earthwork surveys on the ground, but the bulk of such evidence comes from more remote sources, particularly aerial photographs and, a more recent development, from LiDAR. The Cornwall HER

is very comprehensive and has the advantage of an online interactive mapping facility, which maps, amongst other things, sites and monuments (both point and line data), National Mapping Project (NMP) data, based on features identified from aerial photographs, and listed buildings, all overlain on a modern base map. This has allowed for a comprehensive search of the Cornish half of the local study area for recorded earthworks. At the time when this tranche of work was being undertaken, in 2015, it was not possible to interrogate the Devon HER in quite the same way as it was for Cornwall. In the absence of a useable mapping facility, the Devon HER was searched at the time for all entries relating to earthworks which could point to settlement contraction or desertion. The on-line facility has now been greatly improved and has subsequently been incorporated into this study, although this only relates to a transect through west Devon.

Using these resources has revealed physical evidence for settlement shrinkage for both existing hamlets and also farms from within the local study area, which will be described in more detail in the relevant sections below. A summary of the most pertinent data is provided in Table 6.1. The best evidence from the local study area has come from the parishes of Lezant, South Hill and North Petherwin, although this might be a reflection of the level of investigations which have been undertaken in those particular parishes. For the Cornwall portion of the local study area, twenty-five examples of earthworks were identified, although some demonstrably relate to buildings reproduced on 19th-century maps but which have subsequently been lost, and some are associated with settlements which are still fairly large. Interpretation of the evidence can be very problematic, however, as without excavation the exact nature and dating of a particular feature cannot be known. The approach taken here is therefore more a matter of establishing the principle of settlement contraction rather than identifying evidence for it in all cases.

Settlement Form and Size in the Later Middle Ages

With the principle of settlement contraction from the later Middle Ages onwards established, the next step was to examine the layouts of each settlement from within the local study area, starting with the 19th-century map evidence, applying the techniques identified above to estimate the possible minimum number of holdings originally present within each settlement. It is contended that a very approximate estimation of the original number of tenements within each settlement may be reconstructed by looking at the framework of enclosed plots, roads and field boundaries as represented on the 19th-century maps, particularly the more detailed 1:2500 series. This will be described and illustrated for each settlement type, below. Although this is a traditional morphological approach to settlement interpretation, it will be argued that this method is supported by the other layers of data described above. Many small-sized hamlets and large isolated farmsteads, for example, exhibit a pattern of many small closes around road junctions, even when today not all are occupied by dwellings, suggesting a reduction in the number of tenements over time. As described above, the form and layout can, to a certain extent, be matched with the layouts of excavated deserted settlements from moorland locations, adding supporting evidence to this approach. The road and field patterns around many such settlements may in some instances provide corroborative evidence, where they appear to define the limits of particular holdings.

The procedure has therefore been to take each settlement identified on the 19th-century maps and make an assessment of the possible number of holdings that there may once have been, presuming that to have been at the time of maximum population in the High Middle Ages. As will be shown, the results would suggest that widespread shrinkage of settlement has taken place within the local study area and would seem to confirm the contention that many of those farms, which by the 19th century dominated the rural landscape of the South West, had indeed once been small hamlets, whilst the layouts of some of the larger settlements might point to them once having been larger, planned settlements.

The following sections take the major classes of settlement identified in Chapter 5 – villages and churchtowns, large-, medium- and small-sized hamlets, linked farmsteads and large isolated farmsteads – and applies the above criteria to identify evidence for possible contraction.

Small-sized Hamlets and Large Isolated Farmsteads

Documentary evidence and various surveys have suggested that small hamlets, of between two and four tenements, were by far the most common form of rural settlement in the South West in the Middle Ages (Beresford 1964; Fox and Padel 2000). It has also been shown that there was a gradual process, perhaps from as early as the late 13th century, for many such hamlets to contract over time, so that today many are now occupied by single farms. Although located on more marginal land, and often having had a limited lifespan, many investigated deserted medieval settlements on Bodmin Moor and Dartmoor seem to conform in size, in terms of number of tenements, to their documented counterparts in the lowlands, and may perhaps be used as a starting point for understanding the typical layouts of small hamlets in the South West generally.

Using the plan layouts of Brown Willy and Hound Tor I, we may suggest the typical model is of a hamlet composed of two to four separate farms sharing a central townplace, each farm with a longhouse and outbuildings and a group of small enclosures, including yards, paddocks, animal pens and orchards. Lanes and droveways will typically lead out from the central townplace, running between the different compounds / messuages of the hamlet. In more marginal locations, such as with Brown Willy, the majority of these lanes would in effect be droveways leading up onto moorland and waste. On Dartmoor, the settlement at Hound Tor I follows just such a pattern, the constituent farms clustering together (Figure 2.6). If lowland hamlets were generally internally arranged in substantially the same way, the lanes or droveways running out from the townplace between each tenement would have been more established lanes. With a denser settlement pattern, the lanes will form a network of routeways connecting settlements with one another, often in a weblike pattern.

As has been shown in some cases, even where the documentary evidence establishes that there has been a reduction in the number of tenants within a settlement since the 14th or 15th centuries, it can sometimes be demonstrated that the number of actual tenements often remained the same (with some tenants holding more than one tenancy). If this was the case, then the outline structure of the original hamlet may well have survived down to the 19th century, to be preserved in the OS maps. In conclusion, therefore, it is posited that the layout and morphology of small hamlets and isolated farms as depicted on the 19th-century OS maps, can in some circumstances be used to identify lost tenements.

As a point of note, the apparent contraction of small-sized hamlets may not necessarily mean that there has been a reduction in the total number of farms within the local study area, or either that it was a direct result of declining population. More complicated social or structural changes to the landscape may have been taking place. Therefore, in the case of Brown Willy the original hamlet which, by the end of the 13th century, had expanded from three to perhaps six farmsteads clustered together (Figure 6.2), saw a dispersal of the constituent farms from the late medieval period onwards across the local landscape (Herring 1986; 2006a, 58-60).

Two examples may be used to illustrate the application of this procedure, the first being the farm of North Thorne, in the Devon parish of Broadwoodwidger, and the other a small hamlet, Trespearne, in the Cornish parish of Laneast. North Thorne farm (Figure 6.3) is located on a spur of land above the east bank of the River Carey. On the 1880s OS map, at least five lanes are shown converging on the farm, with a series of right-angled turns tracing the outlines of three or four possible former tenements and a central townplace. In the case Trespearne (Figure 6.4), the hamlet is located mid-slope on the north bank of the River Inny, midway between the churchtowns of Laneast and Trewen, and in the late 19th century seems to have consisted of two large farmsteads. It is located at the intersection of four lanes or tracks, their offsetting suggesting that they originally skirted around the enclosures of perhaps three to four original farms. Within the angles created by the off-set road junction, groupings of small

closes, all with buildings, may be observed. The largest grouping, on the east side of the hamlet, consists of six closes, with buildings in two of them, with two closes in each of the south-west and west angles formed by the road junction. On the north side of the junction there is no evidence for any more closes, and the presence of gently curving field boundaries would suggest that this field has been enclosed from a former open field. Lanes running north–south through the hamlet connect the settlement with the main east–west road further up the valley slope (now the A395). Those lanes heading east and west are represented on the 19th-century maps as petering out into the surrounding fields, but if projected further would appear originally to have been connected with other settlements along the valley side. This complements Preston-Jones and Rose's (1986) study of the adjoining parish of Davidstow, which identified medieval settlements at half mile intervals along the same valley, and in similar positions (Figure 2.4).

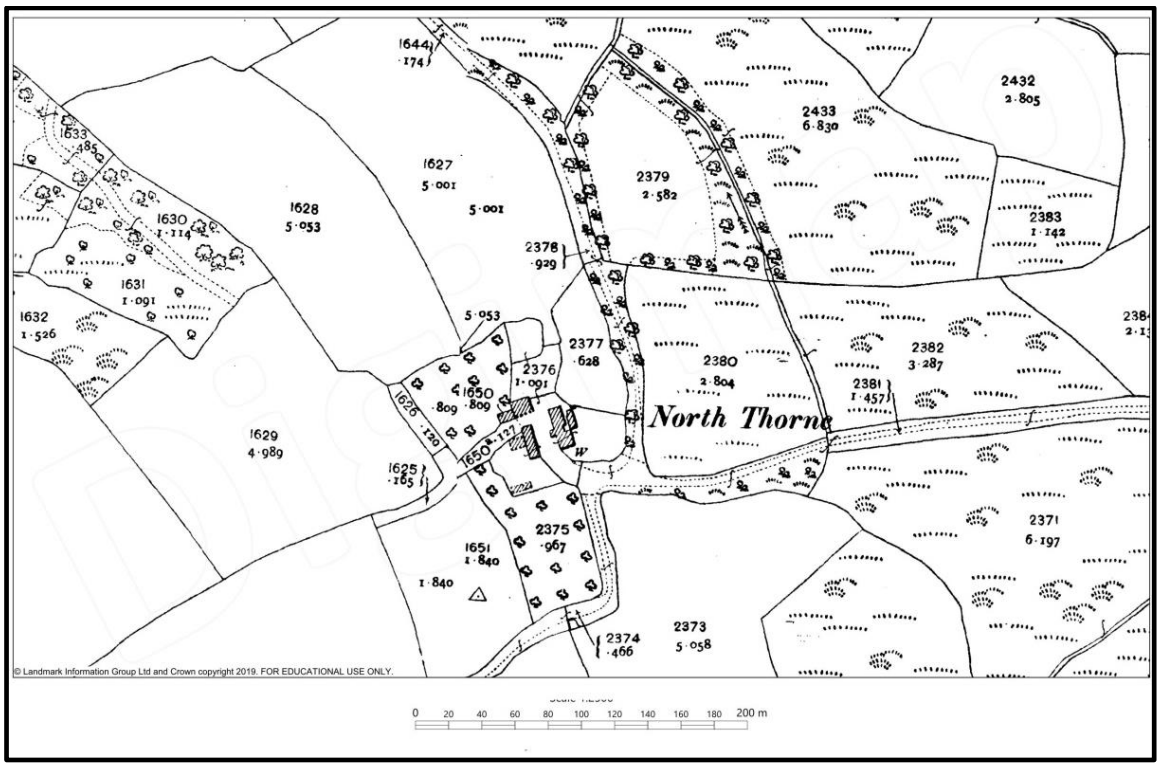


Figure 6.3: The large isolated farmstead of North Thorne, in the parish of Broadwoodwidger. By the late 19th century a large isolated farmstead the pattern of lanes and closes would suggest perhaps three to four original tenements. (Digimap: Twenty-five Inch to One Mile OS 1884).

This morphological approach to map interpretation may be expanded upon by bringing in examples where earthwork evidence would seem to be supportive of the methodology. The best evidence comes from a group of Cornish parishes located between the eastern fringes of Bodmin Moor and the west bank of the River Tamar. The layout of the large-isolated farmstead of Penwarden, St Ive parish (Figure 6.5), for example, first recorded in 1298 (Gover 1948, 204) would seem to indicate that there had once been three tenements. An area of earthworks and possible building platforms are recorded on the Cornwall HER, in the field between the existing farm and the farm buildings on the northern edge of the settlement (HER 171658), in the location of one of the 'missing' farmsteads.

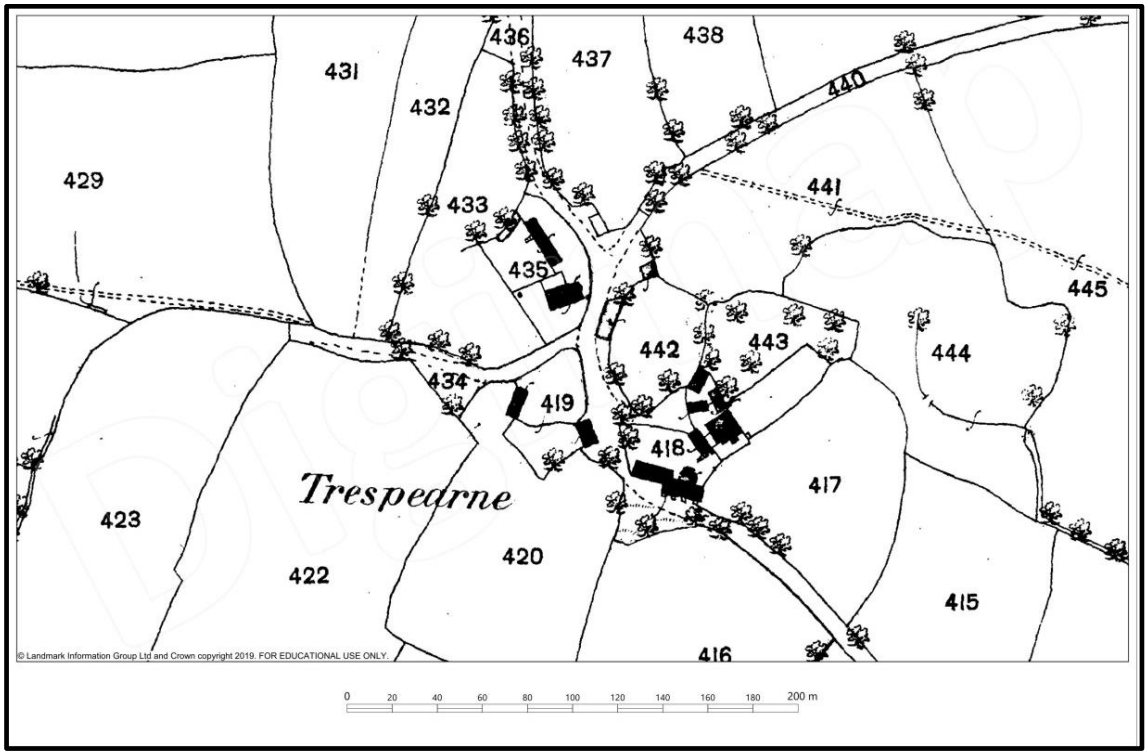


Figure 6.4: The small-sized hamlet of Trespearne, Laneast, which in the late 19th century consisted of two farms. It is suggested that the pattern of lanes and closes originally defined three to four farmsteads. (Digimap: Twenty-five Inch to One Mile OS 1883).

It should also be understood that a large number of large isolated farmsteads may always have held land in severalty. One pattern noted is that although many settlements / farms are on through roads, that is, main roads or lanes

which connect with other settlements, a number of farms are reached via spur roads – side-tracks leading off more established routeways. It may perhaps be suggested that a proportion of these farms are later in date than many of those settlements which are integrated with the network of roads and lanes which criss-cross the landscape, either being established in areas which had been carved out of former communal land or on former waste.

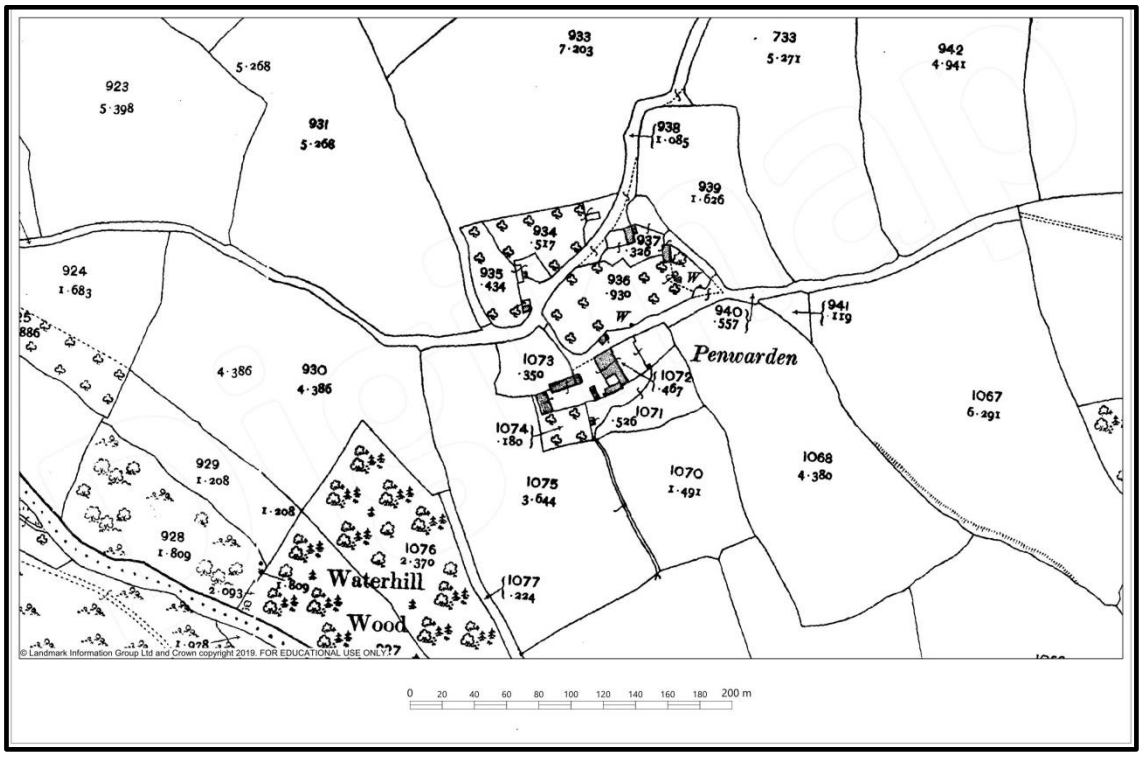


Figure 6.5: The large isolated farmstead of Penwarden, in the parish of St Ive. The road layout would suggest perhaps three original tenements, with the later farmhouse restricted to the southernmost close, as represented on the 1906 1:2500 OS map. Possible building platforms were subsequently identified by CAU in 1994 (HER 171658) in the larger, central close (Digimap: Twenty-five Inch to One Mile OS 1906).

The dating of such farms may also be variable. There is a possibility that some of the latter farms are post-medieval in origin, and indeed a number do have obviously more modern names, such as Waterloo and Cappadocia in North Petherwin, or Holland in the small Devon parish of Bradstone. This is not to say that already existing farms have not been re-named in later times, so one must be careful in making this kind of assumption. On the basis of the discussion above, however, many such farms could have been established in the later

medieval period, say as assarts or as part of the process of settlement dispersal. The farm of Stonaford in North Hill (no longer extant), for example, was established on lands taken from the adjacent settlements of Tolcarne and Treveniel at some point in the 14th century (Herring and Berry 1997, 165).

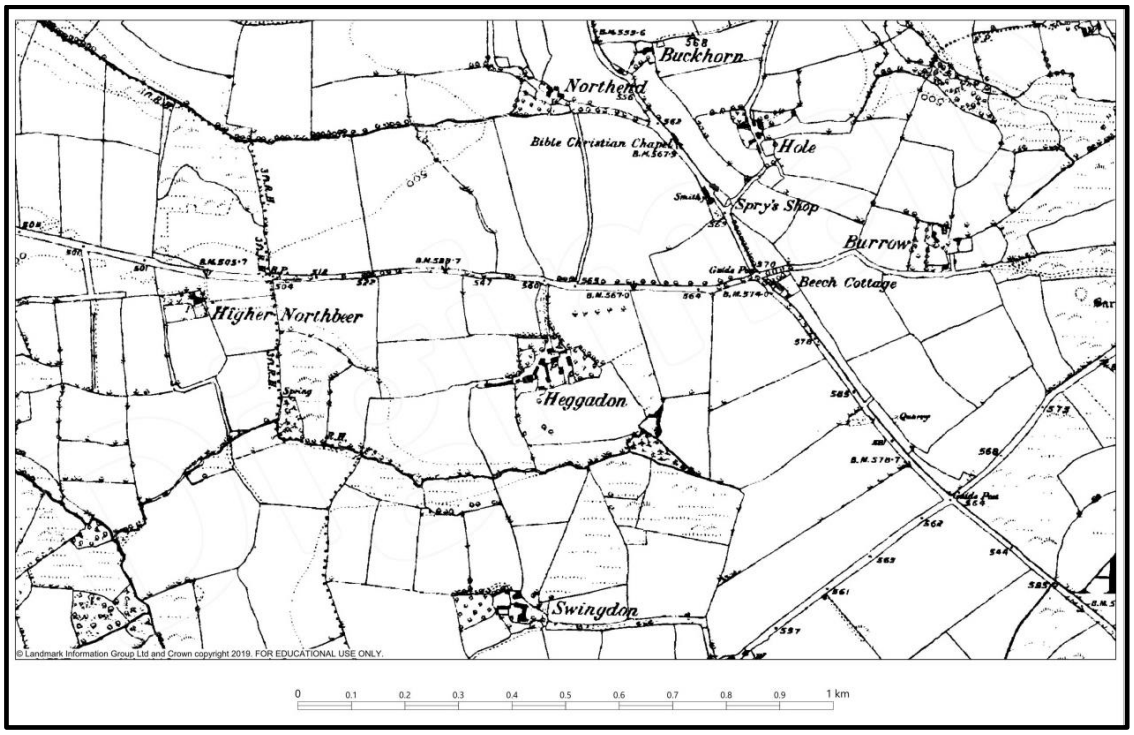


Figure 6.6: The large isolated farmsteads of Swingdon, Heggardon and Northend, in the Devon parish of Ashwater, are each located off spur roads. It is suggested that this may represent later colonisation of downland, above a tributary of the River Claw. (Digimap: Six Inch to One Mile OS 1888).

Farms located on such spur roads include a small group in the Devon parish of Ashwater, comprising Northend, Heggadon and Swingdon (Figure 6.6). When one looks at the name endings, Northend is reminiscent of a pattern seen commonly across England in the later Middle Ages and is often seen as being associated with more dispersed hamlets (Williamson 2018, 8), whereas Heggadon and Swingdon have Old English name-endings. Dating settlements on the basis of their names can be fraught with difficulties, however, as a name may migrate from an original settlement to a successor in a different location.

Large-sized Hamlets and Medium-sized Hamlets

As well as contraction of small-sized hamlets to large isolated farmsteads, there is also evidence of contraction affecting some of the larger hamlets within the local study area, which is manifested in the number of apparent vacant closes within some settlements, when examined on 19th-century OS maps.

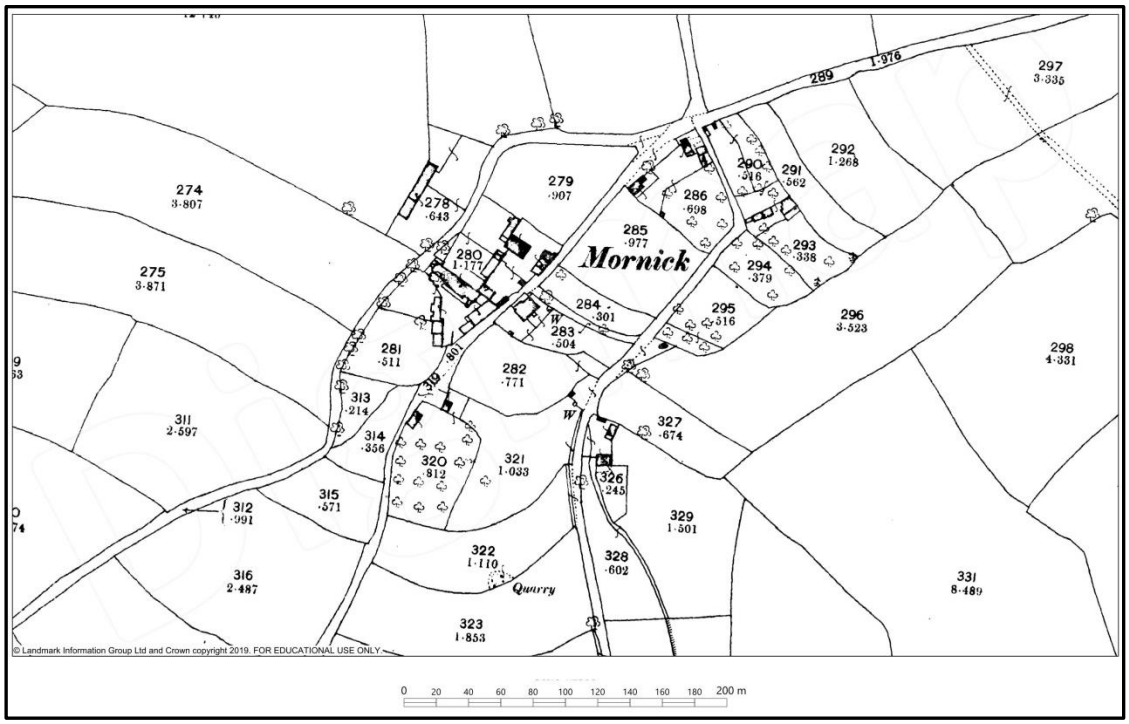


Figure 6.7: Medium-sized hamlet of Mornick, South Hill, as represented on the 1883 1:2500 OS map. Areas of low earthworks have been identified at three locations in the settlement, in fields 281, 313 and 282. (Digimap: Twenty-five Inch to One Mile OS 1883).

The medium-sized hamlet of Mornick in the Cornish parish of South Hill (Figure 6.7) has the appearance of once containing more tenements than was the case in the 19th century. The road layout suggests a larger hamlet, with three roughly parallel roads running through the settlement defining upwards of twenty individual closes. An area of low earthworks, which may be building platforms, was identified in a now vacant close between the central and western lanes through the settlement, with other visible earthworks noted in another close immediately to the south, and a third area of earthworks within a large close on the east side of the central lane (HER 171690). Earthworks have also been

identified on the ground at the medium-sized hamlet of Maders, in the same parish (Figure 6.8), which have been designated as possible building platforms. These are situated at the western end of the settlement in a now unoccupied close (field 774).

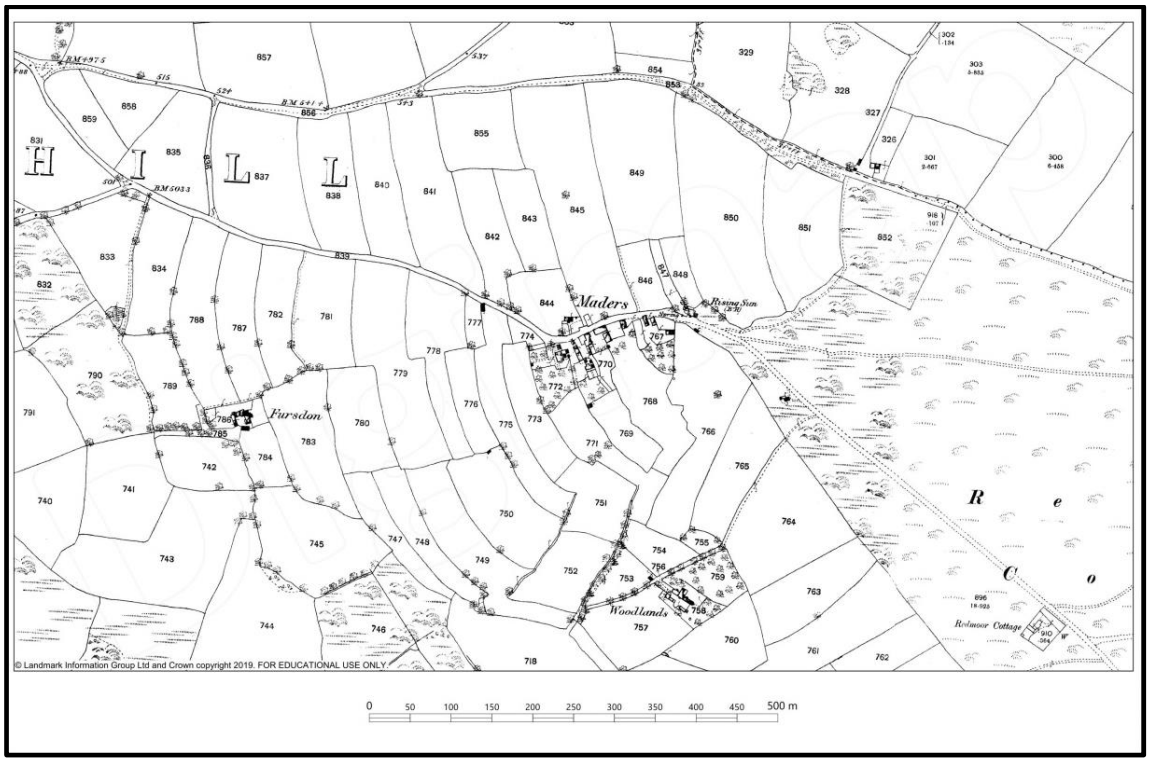
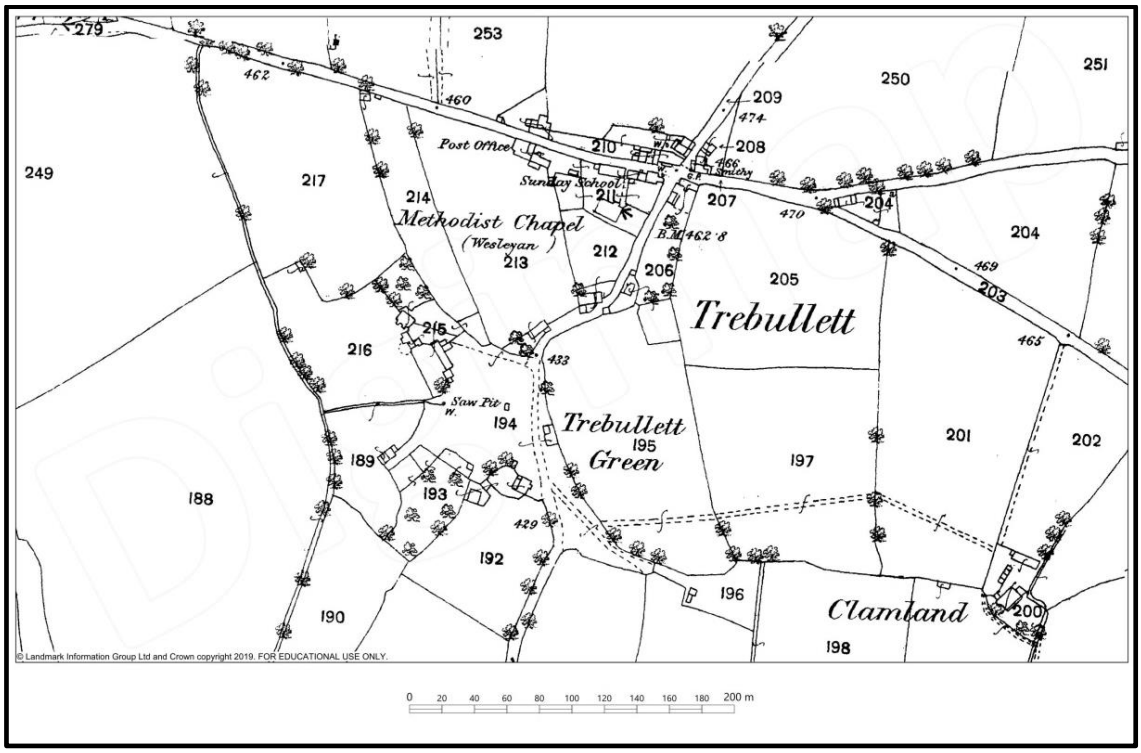


Figure 6.8: The medium-sized hamlet of Maders in the parish of South Hill. Earthworks provisionally identified as building platforms have been identified at the western end of the settlement (field 774). (Digimap: Twenty-five Inch to One Mile OS 1883).



This image has been removed by the author of this thesis for copyright reasons

Figure 6.9: The medium-sized hamlet of Trebullett, Lezant, as represented on the 1884 Twenty-five Inch to One Mile OS 1884 map (top), with an extract from the Cornwall Council Interactive Map (bottom). In the latter, the remains of four small enclosures were identified in aerial photographs, possibly buildings, an area which was clear of structures in 1884.

Another interesting example is of the small-sized hamlet of Trebullett, in the parish of Lezant (Figure 6.9), where today the buildings of the settlement cluster around a main crossroads. In a field to the south-west of the settlement a series of low earth banks identified on aerial photographs are thought to be remnants of building platforms. These comprise four rectangular enclosures and a linear bank and were identified from 1946 RAF aerial photographs, examined as part of the NMP (HER 50020).

The plan layouts of some of the larger examples are also suggestive of their having been planned settlements. In the clearest examples, the settlement will be aligned on a single main street, usually with a series of closes along each side, many, although often not all, still occupied by buildings in the 19th century. In a number of cases, the main street will be straight or very slightly curving, within the settlement itself, becoming less regular beyond the settlement limits, thereby giving an indication of the settlement's original size. The large-sized hamlet of Illand, in the parish of North Hill, for example, is located on a long plateau above a small stream, which lies to its north. The east–west aligned lane oriented along a ridge line runs a little below the crest of the hill. The main street is almost straight, with only a very slight curve, running for a distance of 140m, with slight changes of direction to the south at either end. Both the north and south sides of the main stretch of road have a dense series of closes, many of which are rectilinear with their axes perpendicular to the road. The southern limit of the settlement would also seem to be defined by a near continuous boundary dividing the settlement from the surrounding open field.

As well as the contraction of settlement, it should not be overlooked that there are also examples of the reverse happening, of settlements expanding, particularly in the post-medieval period in response to industrial activities such as mining. Pensilva / Middlehill in the parish of St Cleer, described in Chapter 5, is perhaps the best example of this from within the local study area.

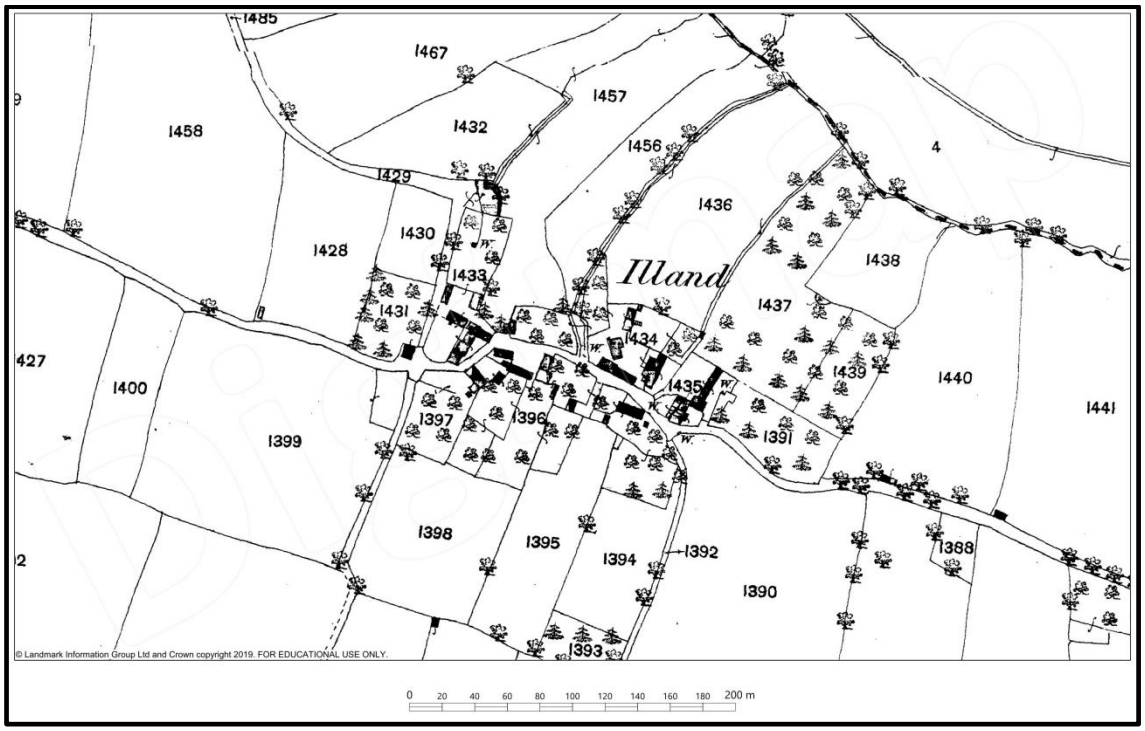


Figure 6.10: Large-sized hamlet of Illand, North Hill, showing the slightly curving main road through the settlement, with slight changes in orientation at either end. (Digimap: Twenty-five Inch to One Mile OS 1884).

Villages and churchtowns

The classic churchtown of the South West was not so much a settlement *per se*, although there would obviously be some form of resident population (if only a rector or vicar and their family), but was more a centre and provider of local services. Churchtowns might typically comprise the parish church and a very limited number of other buildings, such as a rectory or vicarage and perhaps a manor house and/or home farm. By the time that the First Edition Six Inch OS maps were produced, a number of churchtowns might also have included an elementary or Sunday school. Therefore, on the 1884 1:2500 OS map, the churchtown of the small Devon parish of Marystow shows the church, vicarage and Sunday school, and the nearby churchtown for Lewtrenchard, the living of the antiquarian and folklorist, Sabine Baring-Gould, consisted of a church, rectory, manor house and home farm (Figure 3.2).

Figure 6.11: All Saints Church, Dunterton, lies isolated in a field on the south side of the B3362 between Launceston and Milton Abbot, the closest buildings being the barton farm to the south and the former rectory, to the north of the road (photograph – author).

The usual explanation has been that such churchtowns had always been thus, serving scattered rural communities whilst never themselves being centres of population. For many churchtowns within the local study area, there appears to be no evidence to contradict this proposition, archaeological or otherwise. Indeed, if churchtowns had suffered from loss of population and contraction, more so than other rural settlements, then one would expect this to have been reflected in the layout of field boundaries around them, or in the survival of earthworks. Interestingly, geophysical surveying has been undertaken around one such settlement in the local study area, the Devon churchtown of Dunterton (Figures 6.11 and 6.12). Today, as was also the case in the late 19th century, All Saints church stands alone in a field, though in sight of the original barton farm, which lies 170m to the south-east, and the former rectory, which lies on the north side of the main road, some 200m distant. Two phases of geophysical

survey have been undertaken, from which many linear ditches and features have been identified (Figure 6.12), and it was suggested by the surveyors that some may be of building platforms (Dean 2011). Reference was also made by the investigators to a local tradition, of the fields around the church being the site of a deserted medieval village (Dean 2011, 2), though it should be noted that none of the features identified in the survey have been dated, or their exact nature firmly established. The jury is therefore out, and based on morphological grounds, the balance of evidence would seem to lead to the conclusion that the majority of churchtowns were always limited in size.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 6.12: Geophysical survey data from around All Saints Church, Dunterton, showing a series of mainly linear features. Low earthworks are shown in yellow, with the northern group suggested by the surveyors as being of building platforms (Dean 2011, Figure 1).

Developed churchtowns are larger settlements which are perhaps more akin, in terms of size and layout, to large-sized hamlets. Therefore, Lewannick, to the south-west of Launceston, is structured around a series of major lanes

converging at the sub-rectangular enclosure around St Martin's church, the relatively large spaces between suggesting a large settlement from an early date (Figure 6.13). On the Devon Culm Measures, Black Torrington also seems to have been laid out as a larger settlement from the beginning, with a main street, cross streets and a possible back lane, with evidence for burghage plots surviving (Figures 6.14 and 6.15). The settlement also gives its name to the hundred and so was therefore probably more important at an early date. It would therefore seem that many developed churchtowns were relatively large settlements in the medieval period.

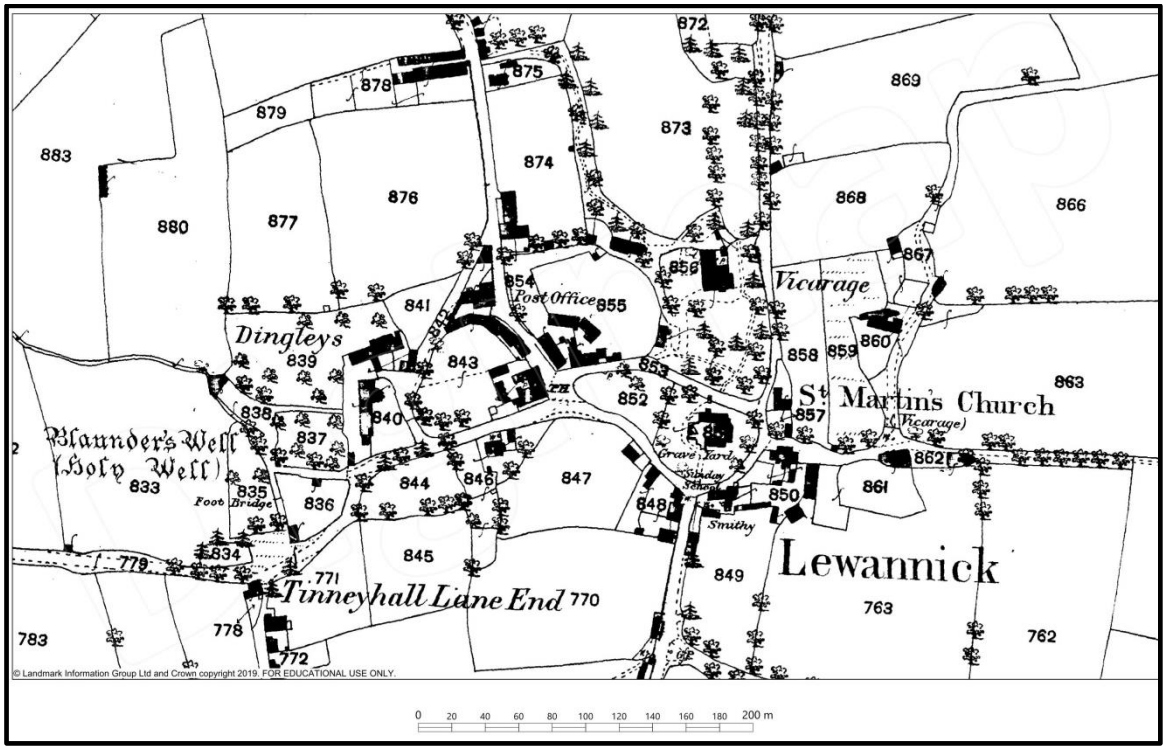


Figure 6.13: Lewannick churchtown, showing the large ovoid enclosure around St Martin's Church, with further large enclosures to the west. (Digimap: Six Inch to One Mile OS 1888).

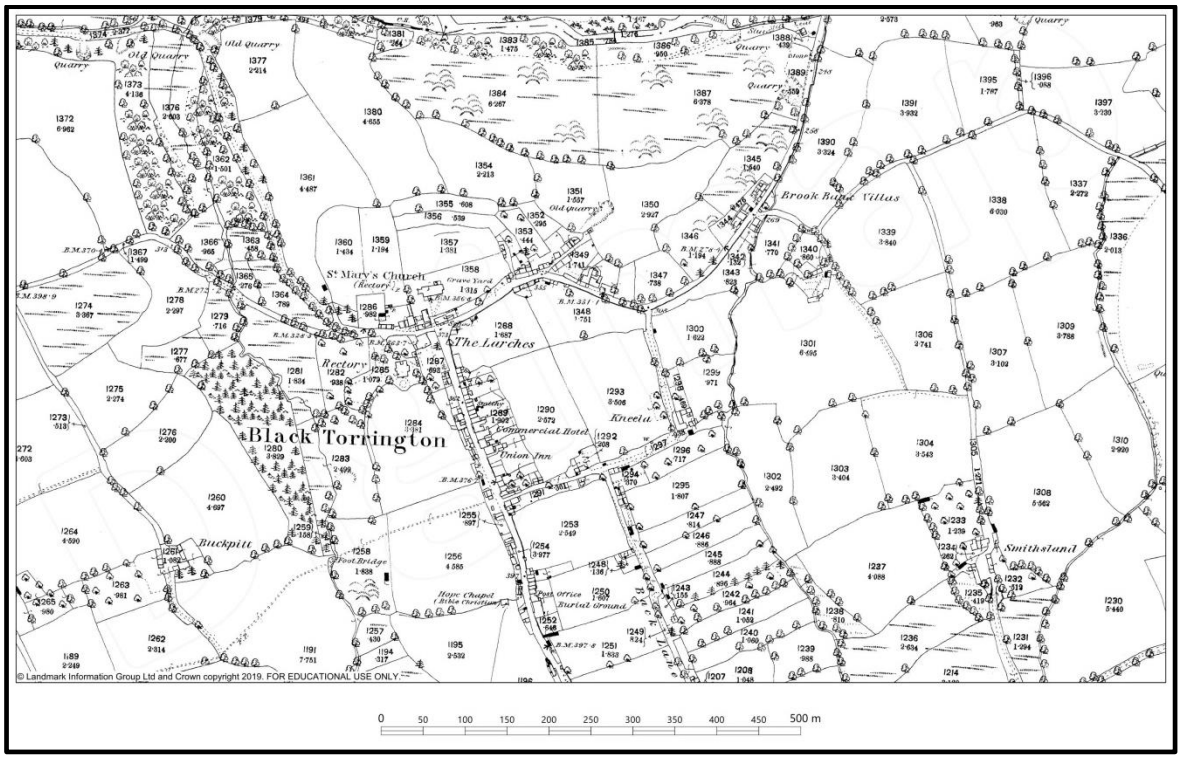
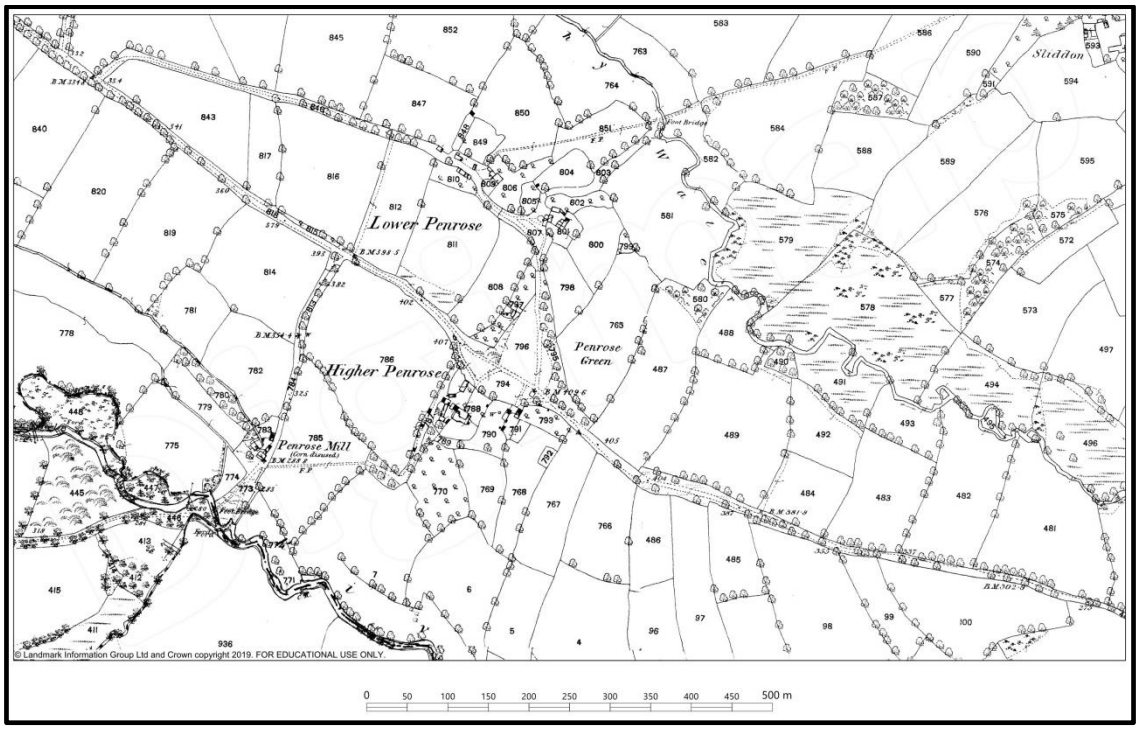


Figure 6.14: Black Torrington lies on slightly elevated ground to the south of the River Torridge, with St Mary's Church at its northern end. Blocks of land on the south side of the settlement have been defined in the Devon HER as being former strip fields although could be burghage plots within the settlement. (Digimap: Twenty-five Inch to One Mile OS 1885).

Figure 6.15: View northwards along Broad Street, Black Torrington, with St Mary's Church in the background (Photograph – author).

Linked farmsteads

As a category, the linked farmsteads identified in Chapter 5 have remained largely unchanged for this exercise, being defined principally on the basis of place-name association. Documentary evidence is available for some linked farmsteads to suggest when the process of dispersal may have taken place, although in most cases this involves quite a wide timespan. For Higher and Lower Trenant in the parish of St Neot, however, there is evidence that this did take place at an early date. Therefore, in 1315 the settlement is simply referred to as Trenant, whilst there is a record of Overa Trenant (Higher) in 1371 and of Nethere Trenant (Lower) in 1507 (Gover 1948, 291). Herring (2006a, 59) also refers to the settlement of Gunan in the parish of Altarnun, recorded as such in 1189 but by 1231 had been split into Overgunan and Nithergunan, now Higher and Lower Tregunnon (Gover 1948, 48).



This image has been removed by the author of this thesis for copyright reasons

Figure 6.16: Higher and Lower Penrose, North Petherwin, as shown on the 1884 Twenty-five Inch to One Mile OS map (top) and Cornwall Council Interactive Map (bottom). In the bottom plan the central green dot indicates the position of extant earthworks on Penrose Green, suggested as the remains of former buildings.

There is also some limited survey evidence for such processes at work within the local study area. For example, between Higher and Lower Penrose in the parish of North Petherwin, a series of earthworks has been identified in an area of rough ground now known as Penrose Green. At least one building is recorded in this location on the 1813 OS map (One Inch to One Mile) and the remaining earthworks have been suggested as being building platforms (HER 2556.30).

Reconstructing Late Medieval Settlement Patterns

Introduction

Using the above rationale each settlement within the local study area was assessed for evidence of possible settlement contraction. The same range of settlement types was employed as was used in the 19th-century study in Chapter 5. Each settlement was evaluated on morphological grounds and a decision made as to whether it should be re-assigned to another settlement type. As with Chapter 5, each settlement was then plotted in the ArcMap project, with developed churchtowns again added to the large-sized hamlet group, and churchtowns to the small-sized hamlet group. As previously, each settlement type was plotted against basic topographical data, comprising of rivers and moorland / late enclosure. The aim was to provide some approximation to settlement patterns and the extent of settlement nucleation in the late medieval period, prior to the hypothesised process of settlement dispersal which is believed to have taken place from the late 13th and early 14th centuries onwards.

Patterns of settlement shrinkage

In summary, the result of this process was for many settlements – of all types but predominately small-sized hamlets and large isolated farmsteads – to be assigned to another category, the majority to the next largest settlement type up. This pointed to an overall trend of settlement shrinkage across the local study area as a whole, during the course of the late medieval and early post-medieval periods. This is in addition to the evidence for some settlement loss

shown by the presence of a number of identified deserted medieval settlements. This represents a reorganisation of settlement patterns with, in many cases, farms dispersing from a central core (as is illustrated by the Brown Willy settlement), but a fall in overall population levels from the mid-14th century onwards is also likely to have been a factor (see Chapter 10).

Of particular importance to the study of settlement contraction was the number of large isolated farmsteads which, on morphological grounds, would seem to have originally been small-sized hamlets. In terms of actual numbers, many farms were upgraded to the small-sized hamlet group, in approximately equal numbers either side of the River Tamar. Therefore, based on this approach it is suggested that 105 large isolated farmsteads west of the Tamar were once small-sized hamlets, with a further 107 east of the Tamar. This increases the overall numbers to 287 and 192 small-sized hamlets, respectively, once those small-sized hamlets which were moved into higher categories were also taken into account (Table 10.1). In terms of the remaining large isolated farmsteads, this left 420 to the west of the Tamar and 376 to the east, with an unidentified number being late medieval or post-medieval in origin. Given our above comments, it is likely that some may always have been single farms holding agricultural land in severalty, with others established later, perhaps as part of the process of settlement dispersal. This should also be seen against the backdrop of overall settlement numbers, with more settlements to the west of the Tamar, at 1189, than to the east, at 816.

Some small- and medium-sized hamlets were also moved into the next largest size category. Therefore, to the west of the Tamar, 40 small-sized hamlets were moved up to the medium-sized hamlet group, and one to the large-sized hamlet group, with a further 10 medium-sized hamlets moved up to the large-sized hamlet group. To the east of the Tamar, 17 small-sized hamlets were moved up to the medium-sized hamlet group and 5 medium-sized hamlets were moved up to the large-sized hamlet group. In the opposite direction, it was decided that some large-sized hamlets owed their size to increasing population as a result of post-medieval industrial or mining activity, there being 5 from Cornwall and 2

from Devon. Examples of this latter phenomenon include Coads Green, in North Hill, and Tinhay, in Lifton.

Settlement shrinkage has therefore been identified from right across the local study area and whilst there are not strong patterns to this process, slightly increased numbers are found in some areas. For Cornwall, the parishes of Davidstow, Altarnun and St Cleer have the greatest numbers of settlements which have shrunk, all being Bodmin Moor or moorland edge parishes. In Devon, the pattern seems to be much more even, except that some of the parishes around Tavistock seem to show less evidence of shrinkage, with the exception of Whitchurch, on the south-west edge of Dartmoor. The latter is more similar to the Bodmin Moor parishes, with good evidence for settlement shrinkage.

This pattern is to some extent repeated when linked farmsteads are brought into the equation, with 90 identified in Cornwall and 52 in Devon. For Cornwall, the largest numbers of linked farmsteads were seen quite clearly in the parishes of St Neot and St Cleer, on the southern edge of Bodmin Moor, and in the adjoining parish of Linkinhorne, located in the agricultural lowlands. Although there does appear to be a moorland/moorland edge factor at work here, the distribution does not exactly match that for presumed shrunken settlements. Although similar processes may be suggested, it may be that the loss and/or dispersal of settlement on the moorlands may have started earlier, perhaps as early as the late 13th/14th century (Herring 2006a, 58), perhaps because a deterioration in climate towards the end of the 13th century made arable farming on the moors increasingly difficult to sustain. Following this, population falls from the middle of the 14th century may then have had a more widespread effect on settlement patterns.

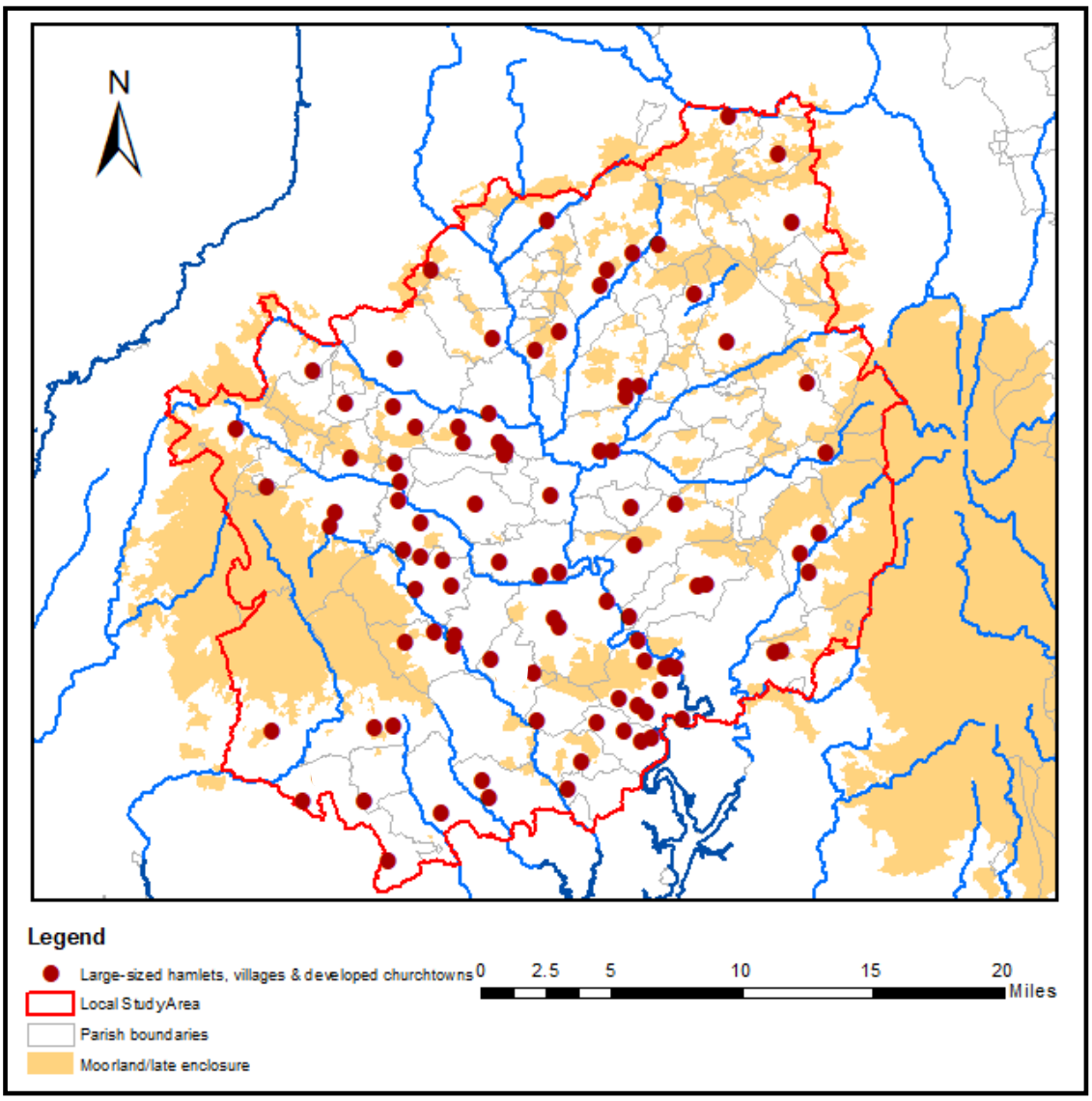


Figure 6.17: Plot showing the distribution of adjusted large-sized hamlets, villages and developed churchtowns across the local study area. (ArcMap Extract).

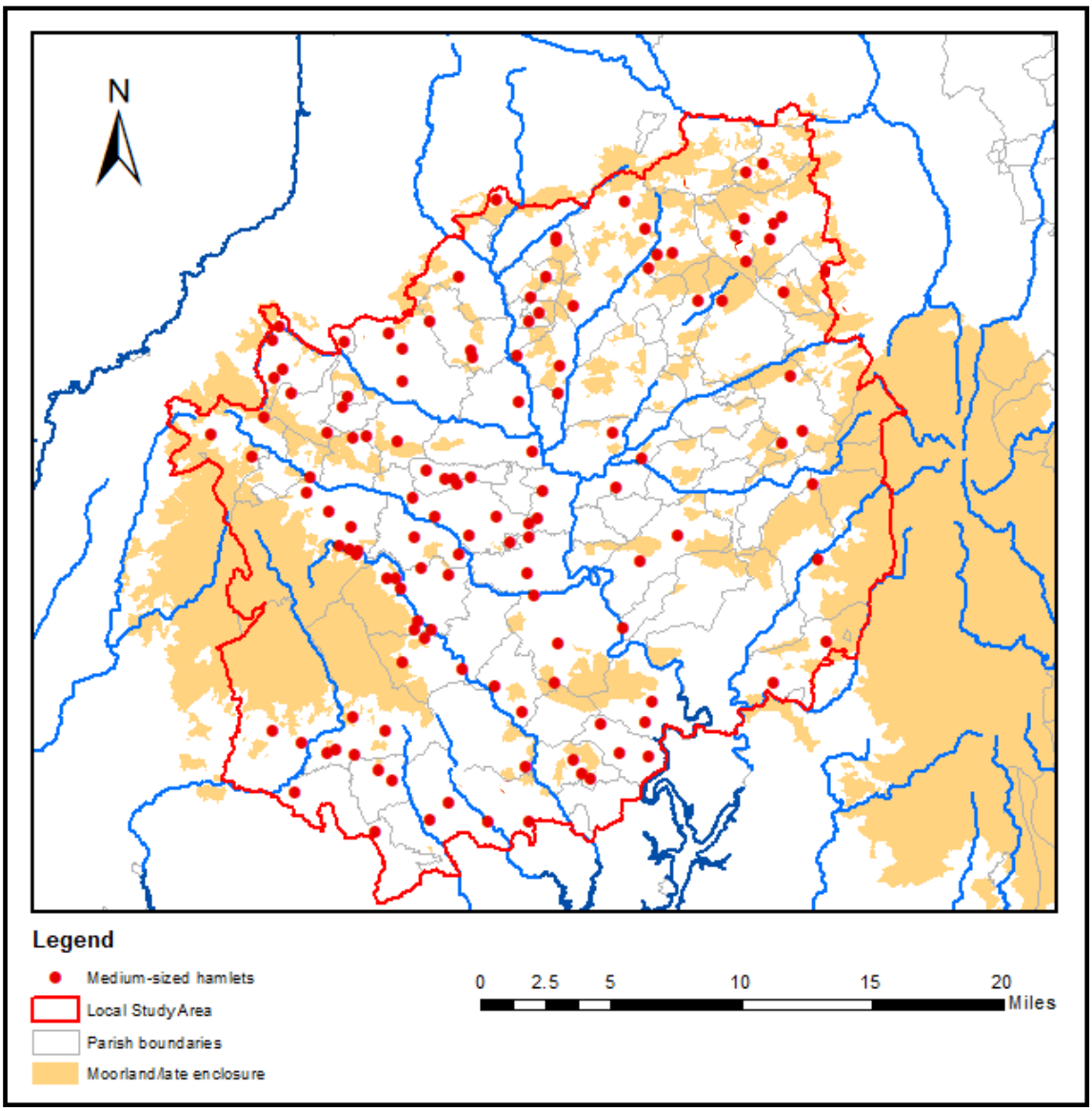


Figure 6.18: Plot of adjusted medium-sized hamlets across the local study area. (ArcMap Extract).

Distribution plots for each major settlement type are presented as figures 6.17-6.20. Briefly, these show a greater concentration of large- and medium-sized hamlets to the west of the River Tamar. There are also greater numbers of medium-sized hamlets across the northern part of the local study area, on the Culm Measures, whilst less clear patterns can be seen with small-sized hamlets and large isolated farmsteads. Analysis of distribution patterns will not be discussed in this section but will be left for the parish by parish analysis in the next section.

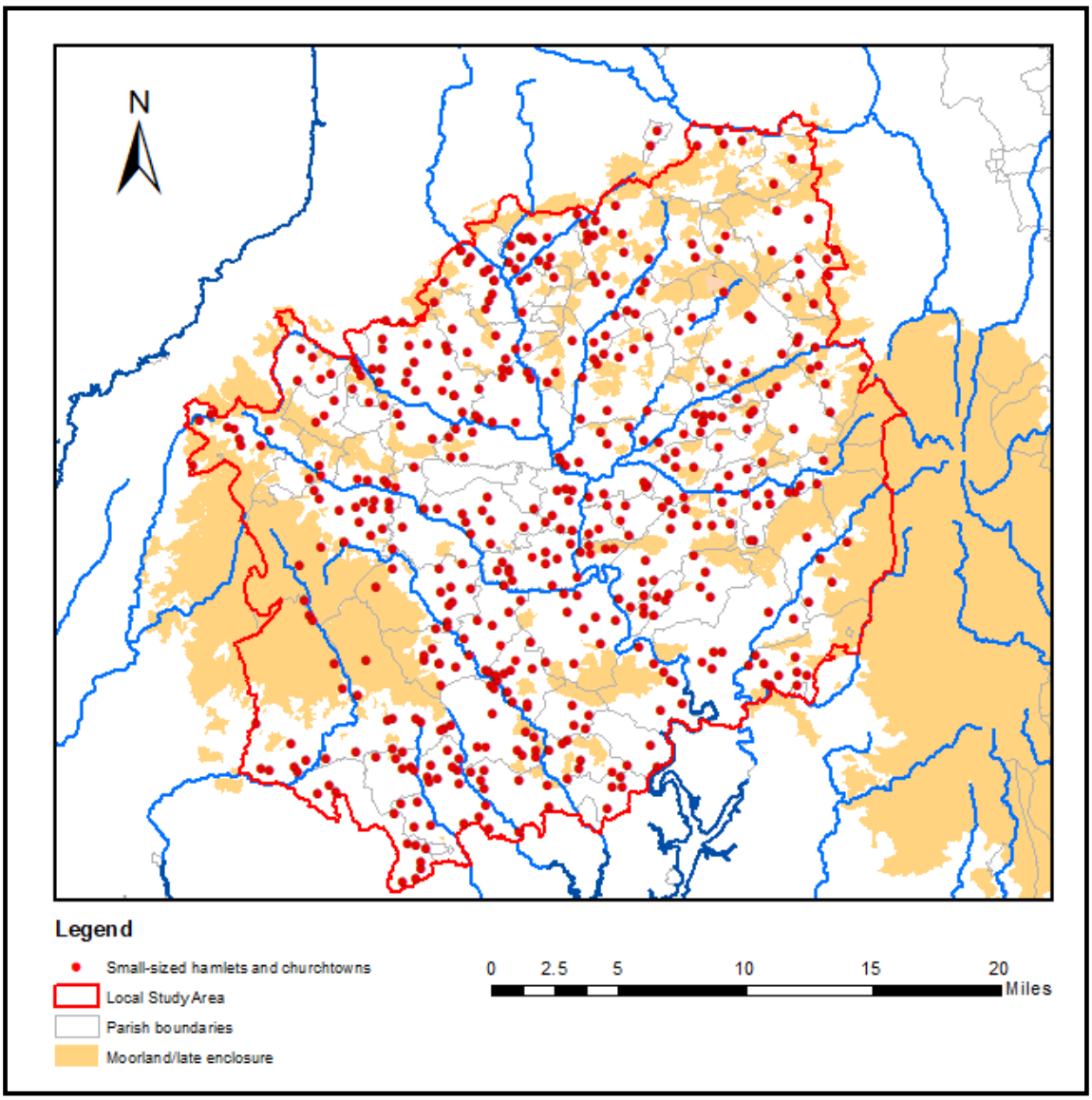


Figure 6.19: Plot of adjusted small-sized hamlets and churchtowns across the local study area. (ArcMap Extract).

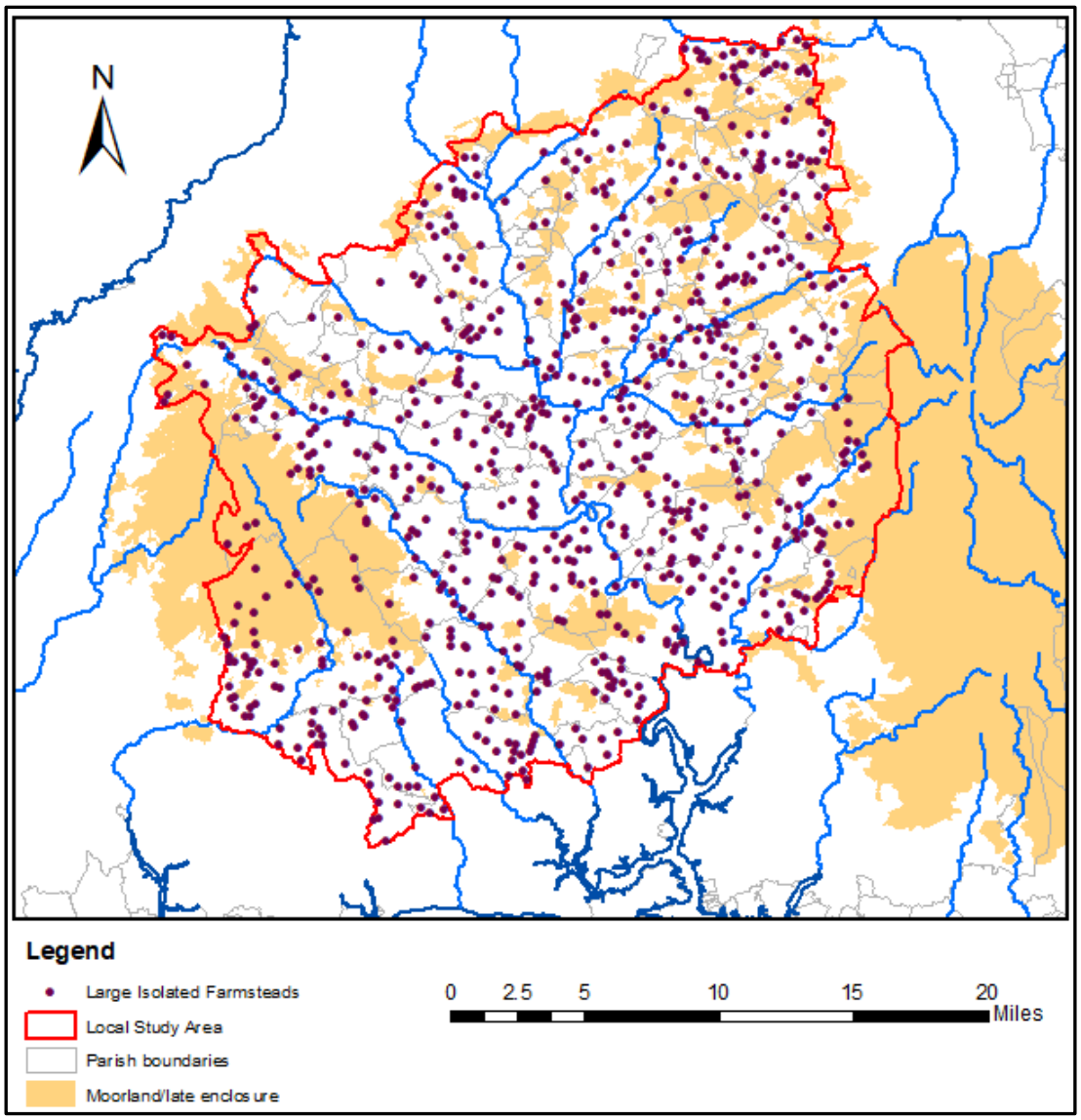


Figure 6.20: Plot of adjusted large isolated farmsteads across the local study area. (ArcMap Extract).

Settlement Patterns

Typology

Adopting the same procedure as was employed in Chapter 5, the next step was to illustrate settlement nucleation/dispersal on a parish by parish basis by looking at the relative proportions of different settlement types. Again, greater weight was given to the larger hamlets. Therefore small-sized hamlets were given a score of one, medium-sized hamlets a score of three and large-sized

hamlets a score of five. Linked farmsteads were treated as small-sized hamlets. The score of the combined hamlet categories (large-sized, medium-sized, and small-sized hamlets, and linked farmsteads) was then expressed as a percentage of the total score, including the large isolated farmsteads (Tables 6.2 and 6.3). As with the survey of 19th-century settlement patterns a higher percentage figure would suggest greater settlement nucleation.

Parishes were then listed in an excel spreadsheet, ordered according to their percentage score in descending order. To allow comparisons with the results from Chapter 5, the parishes were grouped into seven types, with the boundaries between the types drawn at specific percentage points, this time the types being given numerical identifiers to distinguish them from the 19th-century list of parishes. The results are summarised in Tables 6.2 and 6.3. The type groups identified were as follows:

Type 1 (Very high settlement nucleation)

This type consisted of parishes with a score of 90% or above, indicating strong settlement nucleation. Six parishes fell into this type, five of which are to the west of the River Tamar with only one, Clawton, lying to the east of the river. An element of caution with this group is that the majority (with the exception of Clawton) are small parishes, such as Tremaine and Treneglos, with the total number of settlements in each parish quite low. There also appears to be an element of clustering on the northern fringes of Bodmin Moor, on the north bank of the River Inny.

Type 2 (High settlement nucleation)

This type more closely reflects the impression gained from a visual inspection of the point distribution plots (Figures 6.17-6.20). With a factor of 75%-89%, the thirteen parishes falling within this group exhibit strong settlement nucleation and are again dominated by parishes to the west of the River Tamar, with nine out of thirteen being so located. These include the large Cornish parishes of North Hill, Linkinhorne and Calstock, and the smaller parish of Lezant, on the fertile lowlands on the east side of Bodmin Moor. North Petherwin and Boyton, on the Cornish Culm Measures, also exhibit strong settlement nucleation, whilst

three of the parishes to the east of the River Tamar included within this type, St Giles-on-the-Heath, Tetcott and Sydenham Damerel, all border the east bank of the river. It should also be noted that the group does include the parish of St Thomas the Apostle, which includes part of the town of Launceston.

Type 3 (Moderate settlement nucleation)

With settlement nucleation at between 65% and 74%, this large group contains a total of nineteen parishes, twelve of which are located to the west of the River Tamar. The Cornish parishes are scattered across most parts of the local study area to the west of the River Tamar, from large moorland parishes, such as Altarnun and Davidstow, eastern lowland parishes, such as South Hill, as well as parishes to the south of Bodmin Moor, such as St Cleer, Menheniot and Liskeard. Similarly, no particular distribution pattern is discernible with the seven Devon parishes that are included within this type, with Luffincott, Highampton and Virginstow on the Culm Measures; Lifton and Milton Abbot in the fertile lowlands; and Mary Tavy on the western Dartmoor fringe.

Type 4 (Moderate settlement dispersal)

The eleven parishes falling within Type 4 exhibit settlement nucleation of between 55% and 64%. There is now a reversal in the pattern observed with Types 1-3, with seven of the parishes being located to the east of the River Tamar and with only four to the west. With the Devon parishes within this type, the distribution is across the Culm Measures, with Beaworthy and Broadwoodwidger, for example, and along the western Dartmoor fringe, with Bridestowe and Lydford (not including Dartmoor Forest). The four Cornish parishes are fairly widely dispersed, from Quethiock in the south, Stoke Climsland in the east and North Tamerton on the Culm Measures.

Type 5 (High settlement dispersal)

Increasingly marked settlement dispersal is seen with Type 5, with between 45% and 54% settlement nucleation per parish. Of the eleven parishes within this group, seven are located to the east of the River Tamar. For the Devon parishes, a number are located on the Culm Measures, including Bratton Clovelly and Northlew, with others, such as Marystow and Stowford, lying

further to the south. To the west of the Tamar, the parishes include, in the centre, Lawhitton and Werrington (though partially straddling the river in the case of Werrington), St Ive in the east Cornwall lowlands, and St Neot on the south side of Bodmin Moor.

Type 6 (Very high settlement dispersal)

Those parishes with the most dispersed settlement patterns fall within Type 6, with percentages of less than 45%. Nine of the ten parishes within this group are in Devon, with only St Clether, on the north side of the River Inny on the northern flank of Bodmin Moor, lying in Cornwall. The Devon parishes mostly lie across or to the south of the River Thrushel, and include the small parishes of Coryton and Lewtrenchard, in the Lyd and Lew valleys, and also the parish of Tavistock itself, with two on the Culm Measures, Black Torrington and Ashbury.

Type 7 (Wholly urban)

St Mary Magdalen has again been classed as a predominantly urban parish.

Table 6.2: Parishes grouped according to weighted proportion of settlements in late medieval/ early post-medieval periods Types 1-3 (Settlement columns list actual numbers of settlements, whilst total columns are based on the following applied weightings: large-sized hamlets [LSH] weighted 5; medium-sized hamlets [MSH 3; small-sized hamlets [SSH] and linked farmsteads [LF] 1; large isolated farmsteads [LIF] 1).

Parish	County	LSH	MSH	SSH	LF	LIF	Ham Tot	Tot	%	Type
Trewen	Cornwall	3	0	0	0	1	15	16	94	1
Warbstow	Cornwall	1	5	5	4	2	29	31	94	1
Treneglos	Cornwall	0	2	3	3	1	12	13	92	1
St Mellion	Cornwall	1	3	6	0	2	20	22	91	1
Tremaine	Cornwall	0	1	6	0	1	9	10	90	1
Clawton	Devon	2	4	12	2	4	36	40	90	1
St Giles on the Heath	Devon	2	3	3	0	3	22	25	88	2
Lezant	Cornwall	2	5	13	2	7	40	47	85	2
Tetcott	Devon	0	3	3	1	2	13	15	87	2
North Petherwin	Cornwall	1	3	21	5	8	40	48	83	2
Tresmeer	Cornwall	1	1	1	0	2	9	11	82	2
St Thomas	Cornwall	2	5	0	0	6	25	31	81	2
North Hill	Cornwall	3	7	12	4	12	52	64	81	2
St Stephen	Cornwall	5	1	6	1	9	35	44	80	2
Sydenham Damerel	Devon	1	1	6	1	4	15	19	79	2
Calstock	Cornwall	8	2	7	2	15	55	70	79	2
Linkinhorne	Cornwall	4	3	14	9	17	52	69	75	2
Boyton	Cornwall	1	3	8	2	8	24	32	75	2
Ashwater	Devon	3	3	12	2	13	38	51	75	2
South Petherwin	Cornwall	1	6	10	2	12	35	47	74	3
Halwill	Devon	1	3	2	0	6	16	22	73	3
Altarnun	Cornwall	3	7	15	3	21	54	75	72	3
South Hill	Cornwall	2	2	11	1	11	28	39	72	3
Highampton	Devon	2	2	2	2	8	20	8	71	3
Virginstow	Devon	0	0	5	0	2	5	7	71	3
Egloskerry	Cornwall	1	2	4	0	6	15	21	71	3
Lewannick	Cornwall	4	2	3	0	12	29	41	71	3
Menheniot	Cornwall	1	2	17	4	14	32	46	70	3
Laneast	Cornwall	1	1	3	0	5	11	16	69	3
St Cleer	Cornwall	2	6	12	9	23	49	72	68	3
Milton Abbot	Devon	2	2	10	1	13	27	40	68	3
St Dominick	Cornwall	4	3	4	0	16	33	49	67	3
Luffincott	Devon	0	1	1	0	2	4	6	67	3
Mary Tavy	Devon	2	0	1	3	7	14	21	67	3
Lifton	Devon	1	2	13	1	13	25	38	66	3
Liskeard	Cornwall	3	4	19	7	27	53	80	66	3
Davidstow	Cornwall	1	3	9	1	13	24	37	65	3
Callington	Cornwall	1	0	5	1	6	11	17	65	3

Table 6.3: Parishes grouped according to weighted proportion of settlements in late medieval/ early post-medieval periods Types 4-7 (Settlement columns list actual numbers of settlements, whilst total columns are based on the following applied weightings: large-sized hamlets [LSH] weighted 5; medium-sized hamlets [MSH 3; small-sized hamlets [SSH] and linked farmsteads [LF] 1; large isolated farmsteads [LIF] 1).

Parish	County	LSH	MSH	SSH	LF	LIF	Ham Tot	Tot	%	Type
Whitchurch	Devon	2	2	7	7	17	30	47	64	4
Bridestowe	Devon	1	3	4	1	11	19	30	63	4
Pillaton	Cornwall	1	0	4	3	7	12	19	63	4
Quethiock	Cornwall	2	2	7	0	15	23	38	61	4
Kelly	Devon	0	0	5	1	4	6	10	60	4
Broadwoodwidger	Devon	3	0	12	4	22	31	53	58	4
North Tamerton	Cornwall	1	1	11	1	15	20	35	57	4
Stoke Climsland	Cornwall	3	2	10	7	29	38	67	57	4
Germansweek	Devon	1	1	1	1	8	10	18	56	4
Beaworthy	Devon	0	3	3	0	10	12	22	55	4
Lydford	Devon	1	0	1	0	5	6	11	55	4
Werrington	Cornwall	1	1	9	2	16	19	35	54	5
Marystow	Devon	0	0	6	1	6	7	13	54	5
Lawhitton	Cornwall	1	2	5	0	14	16	30	53	5
Bratton Clovelly	Devon	1	1	12	4	21	24	45	53	5
Sourton	Devon	0	0	8	4	11	12	23	52	5
Stowford	Devon	1	1	2	1	10	11	21	52	5
Northlew	Devon	1	4	5	2	23	24	47	51	5
Lamerton	Devon	2	0	12	3	24	25	49	51	5
Dunterton	Devon	0	0	4	0	4	4	8	50	5
St Neot	Cornwall	1	2	13	11	36	35	71	49	5
St Ive	Cornwall	0	0	11	5	17	16	33	48	5
Black Torrington	Devon	1	0	7	2	25	20	45	44	5
Thrushelton	Devon	0	0	12	0	16	12	28	43	6
Ashbury	Devon	0	0	3	0	4	3	7	43	6
St Clether	Cornwall	0	1	3	1	10	7	17	41	6
Peter Tavy	Devon	1	1	4	1	21	13	34	38	6
Coryton	Devon	0	0	3	1	7	4	11	36	6
Lewtrenchard	Devon	0	0	3	0	7	3	10	30	6
Bradstone	Devon	0	0	2	0	5	2	7	29	6
Brentor	Devon	0	0	2	1	8	3	11	27	6
Tavistock	Devon	0	0	4	2	30	6	36	17	6
St Mary Magdalene	Cornwall	0	0	1	0	4	1	5	20	7

The Distribution of Parish Types

The spread of parish types across the local study area is presented in Figure 6.21, offering a tentative reconstruction of relative settlement nucleation/ dispersal in the later Middle Ages. If a basic division is made between Types 1, 2 and 3, on the one hand, being the most highly nucleated types, and Types 4,

5 and 6, indicating more pronounced settlement dispersal, one is able to discern a very clear pattern. This is for an overall trend for settlement nucleation to the west of the River Tamar and greater dispersal to the east of the river. Type 1 may be a little skewed, as it is dominated by a group of small parishes on the northern fringe of Bodmin Moor.

It now remains to make a comparison of the distribution of medieval settlement patterns with that produced in Chapter 5 for the 19th century. If the top two categories for both the 19th-century settlement patterns and the reconstructed late medieval settlement patterns are taken together (Types A and B, and 1 and 2), most of the same Cornish parishes appear. Therefore, twelve of the fourteen Cornish parishes in the top two types in the medieval reconstruction were also present in the top two types using the 19th-century criteria. Where a settlement drops down one or more categories between the medieval and 19th-century type series (for example from 2 to C), a reduction in nucleated settlement between the late medieval and the 19th century is implied. For Cornwall, the largest drops in settlement density were seen with Tremaine (dropped from medieval Type 1 to 19th-century Type E), and with Davidstow (dropped from Type 3 to Type E), both being north-west Bodmin Moor parishes. For Devon, the parishes of Lifton and Virginstow, in the Tamar Valley, were in Type 3 in the medieval criteria, but had dropped to Types E and F respectively in the 19th century. Ashwater on the Culm Measures dropped from Type 2 to Type D. All therefore exhibit a greater degree of settlement dispersal between the late medieval period and the 19th century.

There was also some more limited movement between types, with sixteen parishes moving down one type (increasing settlement dispersal) and fourteen parishes moving up one type (increasing settlement nucleation). Of the former, six parishes were in the Culm Measures, two in moorland locations with, interestingly, three to the south of Bodmin Moor – Liskeard, Menheniot and St Ive. Stoke Climsland would also seem to have suffered a drop. Of those which saw a slight increase in relative settlement density, it is of note that nine are Cornish parishes, including South Hill and Lewannick

In overall terms, the results of this exercise would seem to show that there was a trend for settlement contraction and dispersal in the local study area from the late Middle Ages onwards, with also some actual loss of settlement from moorland locations.

Having looked at settlement patterns across the local study area in this chapter and in Chapter 5, the next chapter will deal with the evidence for, and distribution of, former open field across the same group of parishes. The interrelationship of settlement nucleation / dispersal with open field in the late medieval period will then be assessed in Chapter 8.

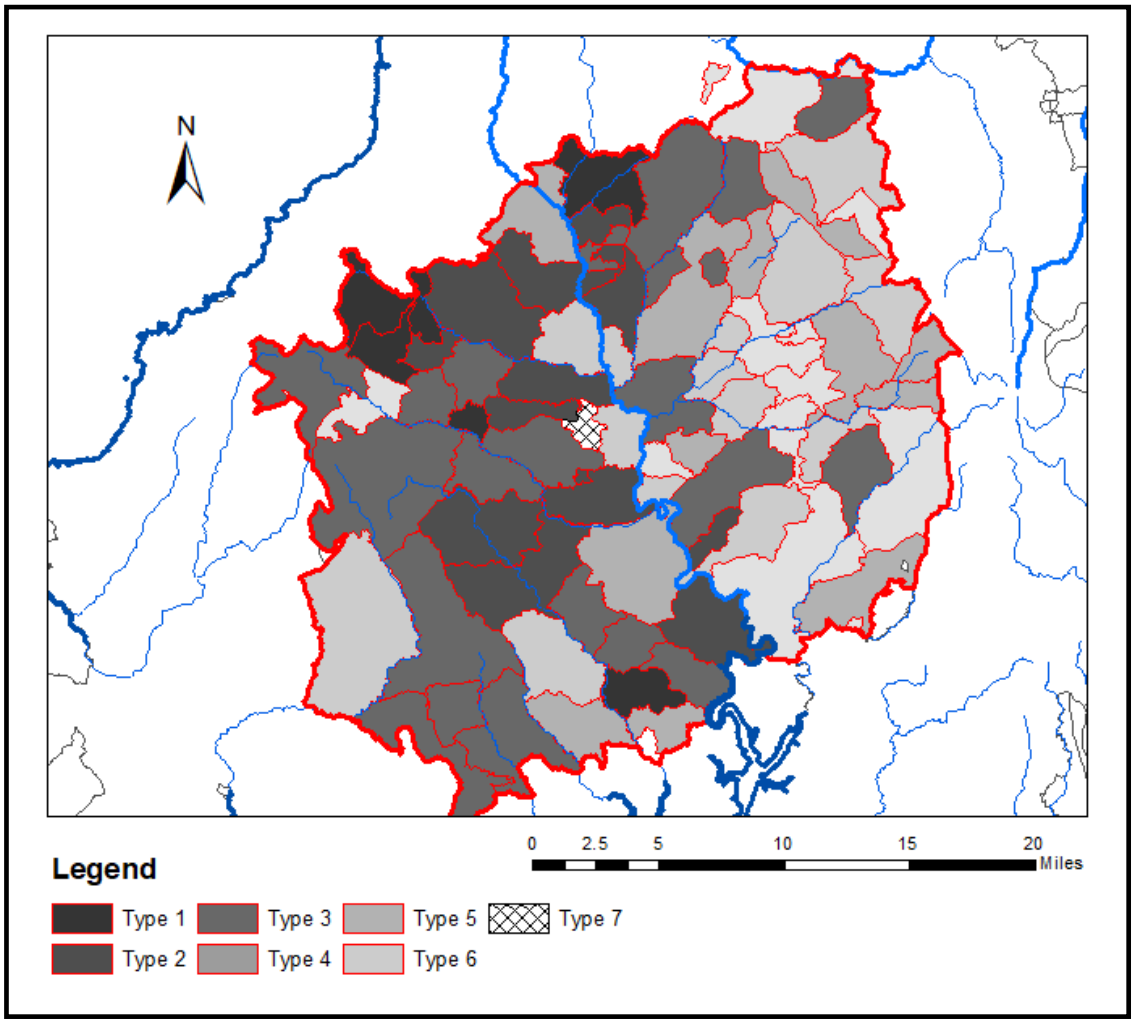


Figure 6.21: Plot of parish types, providing an indication of settlement nucleation/dispersal across the local study area as reconstructed for the late medieval/ early post-medieval periods. Darker shading indicates greater settlement nucleation. (ArcMap Extract).

Local and Regional Variation in Landscape Character: The Significance of the Tamar Valley to the Historic Landscape of East Cornwall and West Devon

(Volume 2 of 2)

Submitted by Philip William Treveil to the University of Exeter
as a thesis for the degree of
Doctor of Philosophy in Archaeology
in November 2019

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature……

7

Field Systems

Introduction

Moving on from the survey of rural settlement detailed in Chapters 5 and 6, this chapter will look at the associated agricultural landscape with a particular emphasis on identifying evidence for former open field. Open field represents a communal method of farming and its presence across the South West has particular implications for interpreting medieval societies, particularly in the light of the long-held belief in the independence of the Cornish character and the self-sufficiency of the 'Celt'. In addition, although it was once commonly held that open field farming was not a feature of the South West, there is now good evidence for its presence in the region, both in Cornwall and Devon, albeit in a distinct regional form, and this will be explored fully in this chapter.

In terms of structure, a brief résumé of the history of open field studies in the South West is followed by an outline of known farming practices in the region in the early post-medieval period. The next sections outline the sources used and the methodologies employed in looking for evidence of former open field in the local study area. As will be seen, the First Edition Six Inch to One Mile Ordnance Survey maps will again form the basis of the work, as was the case with the settlement analyses undertaken in Chapters 5 and 6. The actual process of identifying evidence for former open field was then a two stage procedure. Those field shapes thought to be most indicative of open field are first described, with three particular morphologies identified and basic explanations proposed. How these individual fields then fit together in the wider landscape, in relation to settlement, the road network and the natural landscape, are then used to identify, with varying degrees of confidence, field

systems that may once have been open field, most being a combination of the three field types, with four categories were identified (Categories 1-4).

The next part of the chapter describes how the four categories of field system are distributed across the local study area and if any patterns were discernible, whether in relation to *pays*, topography or the network of streams and rivers. The final section of the chapter explores possible reasons for the distribution patterns observed.

It would be apposite at this point to define the use of the term field system, both in common usage as well as the way in which it is employed in this thesis. It refers essentially to a collection of fields which seem to go together in terms of their size, shape and orientation. It is therefore generally descriptive of morphology and does not necessarily describe an actual process of usage. Having said that, a specific open field system, for example, may well derive its morphology from a particular 'system', that is, crop rotation.

Background

Previous studies

The study of medieval fields in Cornwall and Devon may usefully be taken back to the beginning of the 20th century, with inclusion in Gray's (1915) landmark survey of English field systems. Gray (1915, 258-66) thought that open fields had not been a feature of the South West and this view was later repeated by the Orwins (Orwin and Orwin 1938, 59-61). That pre-eminent historian of Anglo-Saxon England, Sir Frank Stenton (1945, 277), was clear in his opinion that open field systems were 'not found in Devon', and Jerrold (1949, 259) also stated that this form of agriculture 'was never introduced into Devon, Cornwall, or the borderland of Wales'.

Three important mid-20th-century historians of the region, however, recognised early on that open fields had once existed in the South West, but differed in their assessments of their origins, dating and extent. Henderson (1935, 67-8)

saw open fields as linked specifically to towns and regarded them as having an association with late, English settlement, noting that whilst 'parc' was used in Cornish to denote an enclosed field, 'gweal' was used to describe an open field. Subsequently, both Rowse (1941) and Pounds (1944) published documentary evidence which seemed to show that not only had there been open field in the region during the Middle Ages but there were still strip field systems surviving in Cornwall in the 16th and 17th centuries (Pounds 1944, 116-120; Rowse 1941, 33-36), with Rowse pointing to Carew's now oft-quoted statement that 'in times not past the remembrance of some yet living … their grounds lay all in common, or only divided by stichmeal' (Rowse 1945, 33), stichmeal being the common term for strips (Pounds 1944; 1945; Holden *et al* 2010). Following Henderson, Rowse (1941, 35-6) also regarded open fields as an urban phenomenon, however, a late development associated with 14th-century social changes following the upheavals of famine and of the Black Death.

The debate was moved forward in the years following the Second World War, with Finberg's (1949, 182; 1952, 279) detailed historical analysis of Braunton Great Field, located to the west of Barnstaple in north Devon, a rare survival of an extensive open field system. Although referred to by both Gray (1915) and then the Orwins (Orwin and Orwin 1938), each had argued that at Braunton there had been a late colonisation of marshland, the division of fields into strips a supposed consequence of shareholding amongst colonisers. Finberg (1949; 1952) used documentary evidence, however, to show that a system of open fields was already well-established here by the 14th century, implying far earlier origins (Figure 7.1). Finberg (1952, 265-88; 1969b, 129-151) went on to identify other areas of possible former open field in Devon, and in his detailed economic study of Tavistock Abbey and its estates used documentary sources to suggest widespread use of open fields in south-west Devon (Finberg 1951; 1969a).

In the late 1950s, Flatres (1957, figs 37 & 39; 362-5) using tithe maps and large-scale OS map evidence, also regarded enclosed strip fields as having been quite widespread in Cornwall, with an apparent association with hamlets which had a *tre-* prefix, but regarded them as a phenomenon of the 13th and

14th centuries rather than any earlier. It was also recognised that extant strip fields survived at other locations in the South West, at Forrabury Stitches above the coastal harbour of Boscastle in north Cornwall, as well as at nearby Bossiney (Wood 1963; Dudley 2003). An interesting visual summary of the evidence is presented in Shorter *et al* (1969, fig 26, fig 21; Figure 7.2), in which a distribution map of fossilised strips throughout Devon and Cornwall is provided. The work was based on the 19th-century OS map evidence, though little in the way of explanatory text was provided.

Although by the late 1960s there was now recognition that there had once been open field in the South West, there was little consensus as to the nature of the farming regimes that led to their formation. The two most important strands of work at this time came out of the 1967 doctoral theses of John Hatcher (1970a), and that of Harold Fox (1971), on aspects of the medieval rural economy of the South West. As historians, both concentrated on documentary sources, however, the former on the economy of the Duchy of Cornwall in the 14th and 15th centuries and the latter providing a general study of South West field systems. In keeping with the tenor of the debate at the time, both viewed their subject material through the lens of the classic Midlands open field, though drew very different conclusions from their respective researches. Whilst Hatcher (1970a, 10) thought that the few open fields that there had been in Cornwall were associated with boroughs or were the result of 'untypical conditions', Fox (1971, 52-133; 1975) was of the opinion that subdivided strip fields had been widespread in medieval Cornwall and Devon, and also offered a chronology for their subsequent enclosure. Fox noted that those nucleated villages that there were in the South West had often been surrounded by extensive open fields. More interestingly, however, Fox (1989, 54-56) saw many smaller hamlets as also having had open fields 'in miniature'.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 7.1: Braunton Great Fields, as reproduced by Finberg in The Open Field in Devon, (1952, Fig 1, 269).

In the 1980s, Herring's (1986) work on medieval field systems in Cornwall stemmed from his postgraduate research on the deserted medieval settlement of Brown Willy, on Bodmin Moor, with its associated open field system, and later fed into his work with the Cornwall Archaeological Unit in creating the Cornwall HLC. At about the same time, the twenty-fifth anniversary volume of *Cornish Archaeology*, the annual publication of the Cornwall Archaeological Society, included a survey of the then current knowledge on medieval fields in Cornwall (Preston-Jones and Rose 1986, 151-3). Further work by Herring (2006a, 47) has provided a good body of evidence to show that Cornwall had had arable fields which were 'common, open and subdivided into strips'. This pattern seemed to be replicated by Sam Turner's (2007) work on the Devon HLC, which was published somewhat later, although there have been suggestions that the slightly different methodology employed may have exaggerated the

extent of former open field in Devon (Rippon 2012, 115-6). Whether the apparent similarities between Cornwall and Devon in the frequency and extent of former open field as represented in the two HLCs is real or not, considering the different approaches employed in constructing them, is something that will be assessed in more detail in this chapter.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 7.2: Areas where strip-field patterns predominate in the South West. If those areas either side of the Cornwall/Devon border are focussed on, it can be seen that the analysis seemed to indicate a greater concentration of open field in Cornwall. (From Shorter et al*, 1969 Fig 26, 107).*

Three more targeted landscape-based studies which use the 19th-century OS maps extensively are of direct relevance to the analysis of fieldscapes in the local study area. In *Making Sense of an Historic Landscape*, Rippon (2012) found a markedly greater preponderance of open field in west Somerset / west Dorset than in east Devon, seemingly confirming the boundary between Roberts and Wrathmell's Central and South Western Provinces. The other two studies were largely parish-based, the first being of the medieval silver mines in Bere Ferrers parish and the second being the Calstock parish characterisation undertaken for the Tamar Valley Area of Outstanding Beauty (AONB) (Rippon

et al 2009; Wainwright *et al* 2012). Calstock lies within the local study area and in the AONB study was shown to have very good evidence for well-developed former open fields, based on an analysis of the 19th-century mapping evidence. Bere Ferrers lies nearby, just to the south of the Devon section of the local study area, and included within the publication was a landscape characterisation. Bere Ferrers itself had limited evidence for former open field, although a well-defined field system was identified around the borough of Bere Alston. Interestingly, the authors observed that there appeared to be a noticeably greater prevalence of open field evidence to the west of the Tamar (Rippon *et al* 2009, 149).

In terms of fieldwork, there has inevitably been a concentration on moorland areas, where remains have survived because of lack of subsequent arable farming activity, in particular ploughing. Strip fields have been identified in most of Cornwall's moorland areas, and are normally defined by low stone banks running across the contour, 6m to 30m wide and usually 100-200m long. For example, the five to six houses at Brown Willy on Bodmin Moor are associated with 270 ha of land, of which only 53 ha was cultivated, the rest being rough pasture (Herring 1986; Figure 2.5). The site began with two fields divided into a total of seventeen strips and later expanded by creating further blocks. Fields were laid out in regular strips, each 6 Cornish rods (18ft) wide (Herring 2006, 82-5). Herring saw the tenants of a hamlet working their land co-operatively, with fields held in shares, with intermixed narrow strips defined by low banks or balks, scattered through 8-14 fields (Herring *et al* 2011, 289). Even hamlets with two houses had strip fields, such as at Brown Gelly, St Neot, whilst the subdivided fields of Garrow are not so regular (Finberg 1976, 214-23). Given the terrain and the thin, rocky soils, it would seem likely that fields were spade dug (so-called lazy beds) rather than ploughed (Herring 2006b, 91-2).

Fox and Padel (2000) looked in detail at late medieval land tenure and enclosure of Cornish strip fields, mainly through analysis of the Arundell archive. A Duchy of Cornwall surveyor in the early 17th century for the manor of Leigh Durrant, Pillaton states "Some part … lieth in common fields which is hardly found in any manor of his Hihness else in Cornwall" (Fox and Padel

2000, lxxxix). There are medieval references to strip fields at Trevia (Lanteglos by Camelford) in 1356-7; Trevollard in Lanreath in 1446; and late survivals at Blarrick (Antony) in 1578 and at Pendrift (Blisland) 1611-12 (Fox and Padel 2000, ixxx). Fox and Padel (2000, cvii) note that in the amalgamation of tenements *sub una tenure* (under one holding), tenants might allow one house to decay, which might be sanctioned by the landlord.

Agriculture in the South West

Before looking at field morphology as represented on 19th-century OS maps, some explanation of known early post-medieval farming practices in the South West would be in order. Firstly, the dispersed nature of settlement in the region would not have suited the classic form of open fields more typical of the Midlands, where in the main the landscape was composed of nucleated villages and large common fields, often covering whole parishes and under some form of communal management (Rippon 2007). In its most recognised form, all of the agricultural land of a parish or township would typically be divided into two or three large arable fields to allow for crop rotation, leaving at least one field fallow each year, both to allow for its to recovery and for the communal grazing of livestock. Individual fields would be divided into furlongs, each with a number of long strips oriented in the same direction, with villagers holding a number of strips scattered across each furlong / field to allow equitable distribution of the best and worst land (Aston 1985). The terms strip, selion or land were often used interchangeably, and might typically be an acre in extent (660 ft by 66 ft)

With a dispersed settlement pattern of the type seen in the South West, such an arrangement would have been impractical, and by the early post-medieval period a system of crop-rotation known as convertible husbandry is attested to, in which there were many more, smaller fields. Herring (2011b, 289) has described a typical convertible husbandry regime of 8 to 14 fields following a rotation in which at any one time the majority of fields would be under ley (grass), with a small number used for arable, with a 3-4 year cultivation round (and see Chapter 2). Using historic mapping, Herring (2007, 69) recorded 150 such systems scattered across Cornwall, most with 8-14 cropping units, providing an average of 10.36 units. Whilst there does appear to be an

association of convertible husbandry with communal farming, it should be borne in mind that crop rotation can just as easily be practised on a single farm with fields held in severalty.

Detailed analysis of documentary sources of the manors held by the Arundell family of Lanherne, however, amongst other sources, provide ample evidence of strip fields and for open field farming in Cornwall during the 14th to 16th centuries (Fox and Padel 2000). Two 14th-century charters relating to Trevillian, in Luxulyan, and Little Lantyan, in Lostwithiel, for example, describe holdings as being '*sullonatim inter vicinos* (divided into strips or selions) among neighbours' (Fox and Padel 2000, xc). It has also been suggested that the practice of convertible husbandry was of some antiquity and may have developed as early as the period sometimes termed the long 8th century (late 7th to early 9th centuries) (Rippon 2010; Herring *et al* 2011, 267).

Another farming practice occasionally undertaken in the South West which should be mentioned briefly is the infield-outfield system. This simply describes the occasional taking in of rough pasture to be used as arable, the infield being the core cultivated land and the outfield the periodically cultivated pasture (Finberg 1969a, 32-4). Therefore, at Climsland Prior (Stoke Climsland) in 1649, a surveyor noted that tenants were accustomed to 'enclose part of the…down and sow it for one year and then throw it open again (Fox and Padel 2000, xcv).

Procedure

Analysis of field systems will be undertaken using a form of historic landscape characterisation. HLCs as constructed for county councils and other authorities (such as national parks) are essentially land management tools rather than a means of analysing processes in the development of the historic landscape. Compilers of county HLCs are forced to allocate all parcels of land to a specified category, which allows no room for uncertainty. It is also evident that the particular methods and characterisations used in the respective HLCs for Cornwall and Devon show quite a marked lack of consistency. Unlike a traditional HLC, the purpose of this analysis is not to characterise the entire

landscape of the local study area but to concentrate on the identification of a particular activity, in this case open field farming.

The First Edition Six Inch to One Mile OS maps have again served as the basic framework for this analysis. The great advantage of the maps is that they cover the entire local study area, are of a consistent quality, and cross-comparisons may also be made with the more detailed Twenty-Five Inch to One Mile scale OS maps, both being available electronically via Digimap. The underlying premise is that elements of former open field may be preserved or 'fossilised' in the new field boundaries after enclosure. There are two important caveats, however, that should be flagged up at this stage. The first is that the maps illustrate a point in time in the late 19th century; the OS maps do not represent the medieval landscape and those field boundaries that may suggest enclosure of former open field will only be an imperfect, partial survival of their original extent and distribution. The second is that a morphological approach to interpreting fields can be highly subjective, which means that various checks and balances are required to ensure consistency of analysis across the local study area. This is in part procedural – working through the maps systematically and defining potential open fields using strict criteria – but also, where possible, additional layers of information have been used to aid in verification. This includes use of documentary evidence, both directly for open fields and also for their subsequent enclosure.

Some of the documentary sources are general to the region as a whole, although there is also a good resource of material specifically pertaining to parishes and manors within the local study area itself. In Chapter 10, greater depth will be added by examining the tithe apportionments of the 1840s for a selection of parishes. The detailed records of land ownership and occupation contained in the slightly earlier tithe records have often proven useful in identifying intermixing of holdings after enclosure of former open fields and may give a clue to the processes of enclosure. For example, Herring (2006a, 55-6) examined the tithe apportionments for the townland of Treen, in the Cornish parish of Zennor, illustrating the intermixing of strips amongst the fourteen occupiers in 1841.

Additional detail may also be derived from identifying the positions of lost field boundaries, particularly where there is evidence for former alignments contained within aerial photographs, where they may show up as soil or crop marks, or even as low earthworks. One of the most useful resources in this respect has been the corpus of aerial photographs taken across England by the RAF in the late 1940s, where overlapping pictures provide 3D images when viewed through a hand-held stereoscope. The National Mapping Programme (NMP) was designed to analyse these photographs for ancient monuments, with identified features added to the HERs of the relevant counties, where they are then accessible on-line through interactive GIS systems. Cornwall has been comprehensively covered, which means that the information may be taken directly from the HER, whilst that for Devon was still in its early stages when this tranche of work was being undertaken. As described in Chapter 4, in order to redress this imbalance, RAF photographs of the relevant parts of the local study area were examined. These are held at the Devon Records Office in Exeter and some time was spent viewing the relevant transects (1947-8), although no new features were identified. The photographs are now available online, for example through the Devon Environment Viewer, although it is not possible to view them in 3D, as is possible with the original source material. Towards the end of the study, LiDAR data became readily available, although too late to be a major part of this thesis. Use was made of Environment Agency LiDAR data available through the LiDAR Finder facility and a visual scan made of the entire local study area.

The practical task of analysing the 19th-century maps was initially undertaken using paper copies, with those for each parish printed from Digimap at a scale of 1:20,000. This approach allowed for visual scanning, in one go, of a far wider area of landscape than was possible through the much more limited window view of a computer screen. It also allowed for easy cross-comparisons between parishes in different parts of the local study area. The paper copies were always seen as working documents only, however, with the various field categories identified then shaded using coloured pencil. This meant that corrections could easily be made as, inevitably, greater understanding of the observed patterns

was gained as the survey progressed. As what would be regarded as core farmland in the medieval period was of most interest, other elements of the historic landscape were shaded out, such as moorland and areas of evident late enclosure.

Analysis was undertaken as a two-stage process. The first stage involved looking at the outline shapes of individual fields and identifying those morphologies most likely to have been derived from former open field. During this procedure three types were identified: strip-based fields; cropping units; and semi-regular fields. The next step was to use these types in combination to define, with varying degrees of certainty, the presence and extents of possible former open fields within the local study area. Four categories of field system were identified, the original rationale reflecting the degree of confidence that there was in attributing their origins to former open field. The first of these is termed Possible Open Field Category 1 and is dominated by strip-based fields, with Possible Open Field Category 2 dominated by cropping units. Possible Open Field Category 3 may include a range of field types, although is dominated by semi-regular fields; whilst Possible Open Field Category 4 includes blocks of rectangular fields, generally in moorland edge locations. Field systems within these four categories were then marked on the paper copies of the OS maps, shaded with coloured pencil. Areas of 19th-century unenclosed and clearly Late Enclosure, such as downs and moorland, were also shaded, identifiable by their dead straight field boundaries (for example Figure 7.3). This was to give a sense of the proportion of possible former open field in relation to the overall amount of anciently enclosed land.

The paper map copies were then worked through systematically, starting in Cornwall with the north-western parishes and finishing with the southern Devon parishes. As there is inevitably a degree of subjectivity in the procedure, and as understanding of the fieldscape improved with greater familiarity with the field patterns within the local study area, the procedure was undertaken three times to eliminate as much bias as possible. This allowed alterations and checks against, for example, the larger scale 1:2500 OS maps, satellite images accessible in Google Earth, with its useful 3-D facility providing an additional aid

to understanding the topography, and the modern aerial photographs available through Digimap. There was also selective cross-comparison of parishes to check that any observed differences between different parts of the local study area were genuine and not simply a result of the stage in the process of analysis in which they were examined. On completion of these procedures, each identified field system was transcribed into ArcMap, as shapefiles for each field type.

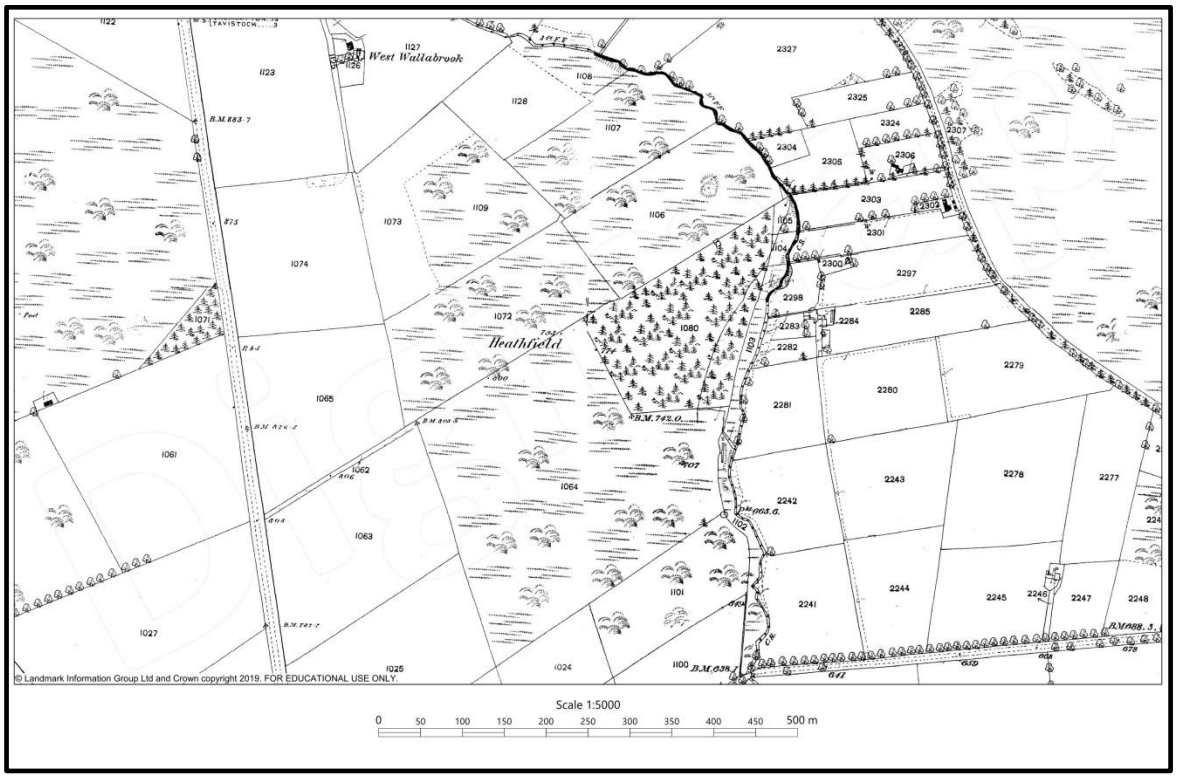


Figure 7.3: Fields to the east of Chaddlehanger, Lamerton. The dead straight field boundaries are typical of late enclosure, having been laid out by professional surveyors. (Digimap: Twenty-five Inch to One Mile OS map of 1884).

Field Morphologies

Introduction

The identification of enclosed former open fields is in large part based on detecting the former component strips where they have been preserved in later field boundaries, following enclosure. It should be noted, however, that such strips are not necessarily individual 'plough strips' as such but were narrow parcels of land allocated within the open field. The plough furrows which went to make up the strips will have been long and narrow, but unlike their modern equivalents, which result from use of machinery, plough strips in the past tended to exhibit a slight curve. This is explained by the need for a plough team to undertake a wide turn as it approaches the end of each run which, when ploughing in both directions, would result in curving at each end of a strip. The resulting strip outline is described as being a reversed-S or aratral curve. In the South West what is more commonly seen, however, is a single curve or reversed-J, which has been interpreted by some as resulting from ploughing in one direction (Herring 2006, 68-70). With some notable exceptions, such as at Braunton Great Field, strips usually follow the slope, with the reversed-J apparent when viewed from the bottom of the slope. It has been inferred from this that ploughs worked downslope only (Eyre 1955, 86), with the plough always turning to the left at the end of a run. It has been suggested that mould boards were designed to turn the sod to both right and left, which means that they could not have been fixed, though such 'one-way' ploughs are not attested to in Cornwall until the 16th century (Herring 2006b, 69). They may have been adopted because of the steepness of many slopes in the South West. This may be seen with the fields around Trehunist, Quethiock, where field boundaries follow the slope off the plateau in different directions, into the valley of the River Tiddy and stream side valleys, in each case following the slope. This contrasts with the usual pattern seen in more central areas of England, such as Somerset, where ploughing tended to follow the contours.

Details on actual plough teams is hard to come by, although they are generally assumed to have been drawn by oxen. At the time of Domesday, the standard team is given as eight oxen (Williamson 2003, 120-1), though it is unclear to

what extent this actually reflected reality on the ground. Plough team assessments are also given in Domesday for individual holdings. Therefore, in the Exeter Domesday entry for Lewtrenchard, one plough team is recorded for the demesne, with a further six villein plough-teams (Darby and Finn 1967, 236).

The limits of a township and field system will usually have an outer curving stock proof boundary, or ring fence (Herring 2006, 93). Although initially systems of shareholding may have operated, by the time of enclosure individual strips often seem to have become part of the permanent holdings of individuals, often separated by low earth banks, or 'balks'. These were in themselves fairly insubstantial structures and, where necessary, could easily be swept away in any reorganisation of fields. Where more permanent boundaries were erected at the point of enclosure, however, the lines of some of these balks were followed. For Cornwall, surveys of 1575 show strips of average size of one rood (1/4 acre) at Bedrugga; average two roods (1/2 acre) at Tolcarne Merock; and four roods (1 acre) at Tresawsen (Fox and Padel 2000, lxxxiv, 214, 217 & 232). With enclosure, therefore, the line of the new field boundaries will often have been determined by the basic shapes of the underlying strips. Where enclosure has been by agreement, new holdings would be based on amalgamations of strips in bundles of varying sizes, with field boundaries preserving the shape of the outer strips in each bundle.

Bigger groupings of strips would therefore result in larger fields which are rectangular or square, although usually these will retain two curving parallel sides on the long axes, where the lines of the outer strips have been preserved. Fields of this size and shape, and presumed origins, have been described by Herring as 'cropping units' (Herring 1998; 2006a). It has also been suggested that such cropping units may not always simply be amalgamations of strips but that they could represent the south-west equivalent to furlongs, a subdivision of an open field where the constituent strips were oriented in the same direction (Herring 2006, 67-8; Figure 7.4).

Previous typologies

Before outlining the typology of fields to be used in this study, it would be appropriate at this point to summarise the typologies used in five other particularly relevant studies. These comprise the respective HLCs for Cornwall and Devon; the landscape characterisations used in *Making Sense of an Historic Landscape* (Rippon 2012) and *Mining in a Medieval Landscape* (Rippon *et al* 2009), the latter including a landscape study of Bere Ferrers parish; and the Calstock parish survey for the Tamar Valley AONB (Wainwright *et al* 2012).

The Cornwall HLC defines much of the county as being covered by Anciently Enclosed Land, within which are three sub-categories of field form relevant to the current study: *medieval strip fields (unenclosed)*; *medieval strip fields (enclosed)*; and *fields derived from medieval cropping units*. Surviving strip fields in north Cornwall, at Forrabury Stitches and at Bossiney, have already been mentioned (Herring 2006a, 69). *Medieval strip fields (enclosed)* are thought to derive from groups of two or three strips enclosed together, with cropping units being larger fields comprised of many more strips (Herring 1998; 2008, 22-24).

The Devon HLC was put together somewhat later and although it employed essentially some of the same field types as its Cornish counterpart it did differ in a number of respects (Turner 2005). Therefore, extant *strip fields* were also included, being represented by Braunton Great Field. The other two main types were *enclosures (strips)*, equivalent to Herring's *medieval strip fields (enclosed),* and *medieval enclosures based on strip fields*, the same as *cropping units*. To these were added two post-medieval groups. The first were termed *enclosures – post medieval based on medieval strip fields*, which are described as large rectangular fields with boundaries which are curving. The last category was *strip fields post-medieval*, which are thought to be outfield cultivation of upland grazing (Turner 2005, 28-44; 2007). In some ways, the methodology employed in Devon would seem to be over complicated and more interpretative than that for Cornwall, particularly when assigning dates to the different categories.

The remaining three surveys have a certain degree of unity, which is unsurprising given that there is some continuity in authorship, with all three also using the First Edition Six Inch to One Mile OS maps as a basis. In *Making Sense* (Rippon 2012, 130), enclosed strip fields are identified as a principal indication of former open field. In addition, broad, rectangular fields without dead straight edges were termed *intermediate fields* and were thought to have a superficial resemblance to cropping units, although some could also have resulted from enclosure of pasture. The category is based on morphology rather than straight interpretation. Where such fields were found located adjacent to identifiable enclosed strip fields, however, it was felt that they could represent enclosure by agreement of open fields (Rippon 2012, 121-8; Figure 7.5).

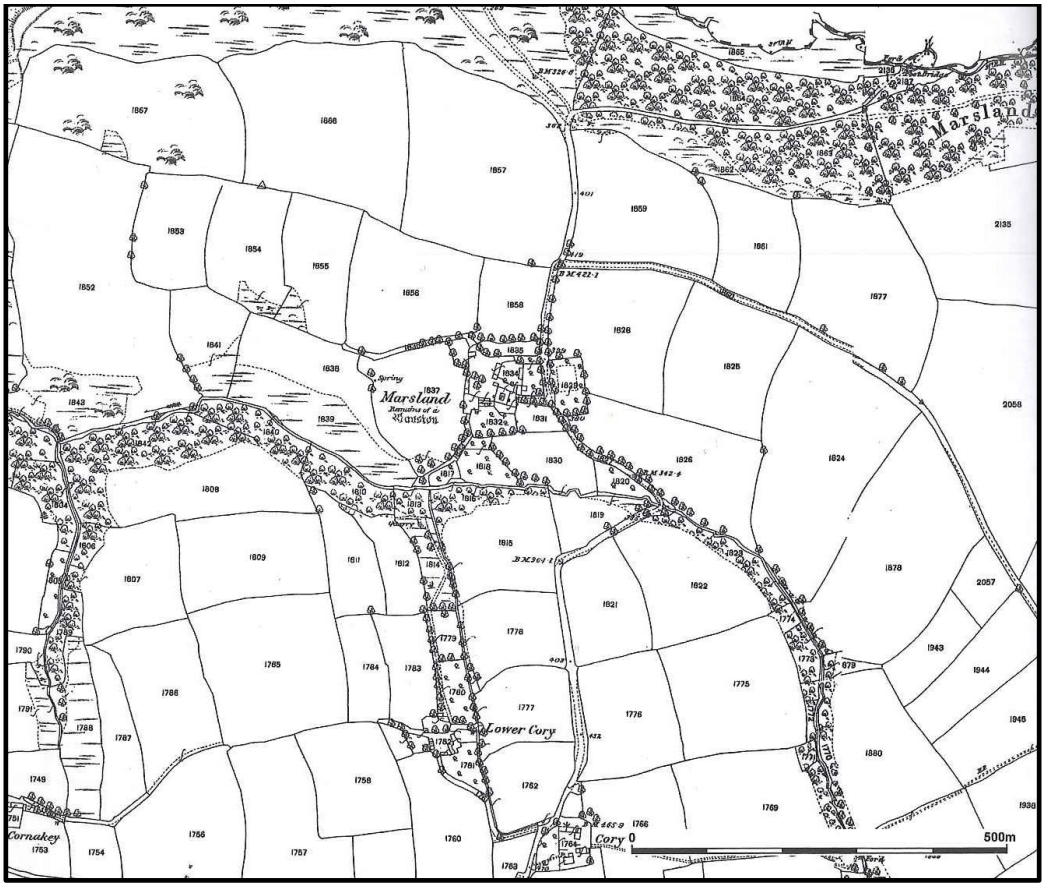


Figure 7.4: Cropping units around Marsland and Cory in Morwenstow parish, Cornwall, based on 1st edition OS 25-inch map c. 1880. Strips have been removed but the outer boundaries have retained the curving-J boundaries. (From Herring 2006a, Figure 32, 68).

The study of the royal silver mines in Bere Ferrers (Rippon *et al* 2009) and the Calstock parish landscape survey (Wainwright *et al* 2012) provide the most directly relevant typologies to this study, the former parish being immediately to the south of the study area and the latter actually lying within its boundaries. For Bere Ferrers, although principally focussing on mining, a brief study of the surrounding rural landscape was also undertaken, which included assessments of the fieldscape and of the evidence for former open fields (Rippon *et al* 2009).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 7.5: Intermediate fields in the parish of Clayhidon, eastern Devon. Distinctive rectangular block-like fields are located to the north of Garlandhayes, around Willtown. A group of strip-based fields is located to the south of Willtown. (Edited from Rippon 2012, Fig 6.5, 122).

The detailed analysis of Calstock parish for the Tamar Valley AONB provided a field landscape characterisation along the lines of an HLC, in that it categorised all elements of the landscape. With both studies employing basically the same range of typologies, two of the categories are of particular relevance to this

study, the first being the now familiar *strip-based fields* and the second *cropping units*. There is therefore some continuity with Herring's original categories for the Cornwall HLC.

Historic Landscape Character Types

The first step was to identify field types which, as suggested by their shape, could point to them having been derived from open field; this is therefore not a comprehensive scheme of allocating all fields to a category along the lines of a traditional HLC. Based on outline form, three relevant field types were identified, although all are notable for having parallel boundaries, curving on one axis. The field types were as follows:

Strip-based fields

These are long narrow fields with curving parallel sides on the long axes, usually with a reversed-J profile. They are much longer than they are wide (a ratio of 1:3 or greater) and in most cases follow the hillslope, usually with several such strips running parallel to one another. As previously described, strip-based fields are thought to represent perhaps two, three or four amalgamated strips (allocated strips, not plough furrows).

A particularly good series of strip-based fields can be seen associated with the two adjacent large-sized hamlets of Metherell and Harrowbarrow, in the Cornish parish of Calstock. Those around Metherell vary in length from 150m to 200m (165-220 yards) and most are between 40m and 60m (45-65 yards) wide, with the narrowest at around 15m (16 yards) in width. Broadly, these measurements fit the traditional dimensions of strips, at a furlong length of 220 yards. Unusually for the local study area, some of the longest strips at Metherell and Harrowbarrow actually exhibit reversed-S curves (Figure 7.6).

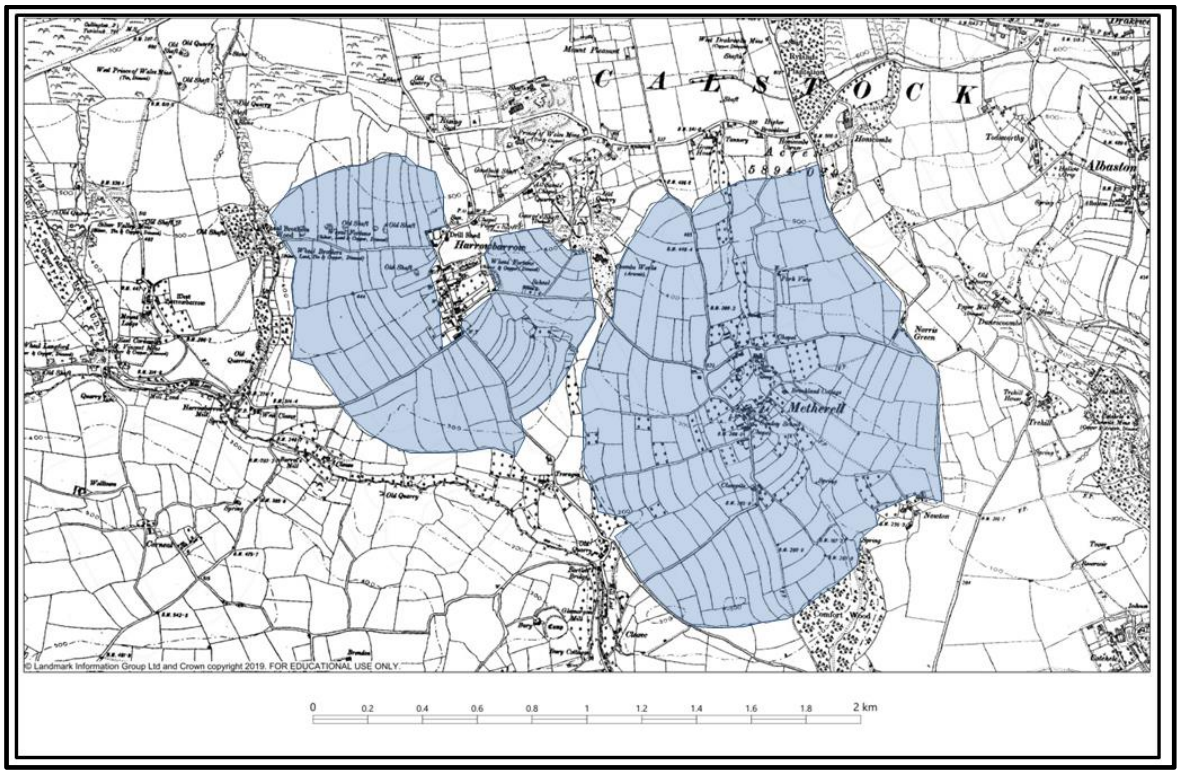


Figure 7.6: Well-developed field systems around the hamlets of Harrowbarrow and Metherell, in the parish of Calstock, Cornwall. These are the best examples of strip-based fields in the local study area, with many boundaries exhibiting a reversed-S profile. (Digimap: Six Inch to One Mile OS map of 1907).

Cropping units

The use of the term 'cropping units' is in some ways problematic, as it implies a group of fields which were cropped together, perhaps along the lines of an open field or even an individual furlong within the open field. Herring sometimes uses the term to correspond with 'furlong', and this does indeed seem to be the case with reference to the well-defined field systems around Metherell and Harrowbarrow (Herring 2006a, 60). The term is also commonly used to describe the actual morphology of the component fields, rather than the process of cropping (for example, Wainright *et al* 2012, 25-7). The latter is the sense in which the term is used in this study, as a description of morphology, because it is so well-established in the region.

In outline, cropping units are broadly rectangular, with two curving parallel sides exhibiting the same reversed-J profile as is seen with strip-based fields, but with a ratio of width to length of less than 1:3. A number of fields will often line up

together, suggesting common headlands. As discussed above, there is good evidence to support the contention that in some circumstances cropping units may be amalgamations of many more strips than was the case with strip-based fields, possibly even corresponding with furlongs. In support of this contention, it is noted that cropping units are also often found in association with strip-based fields, for example as is the case with Metherell (Figure 7.6).

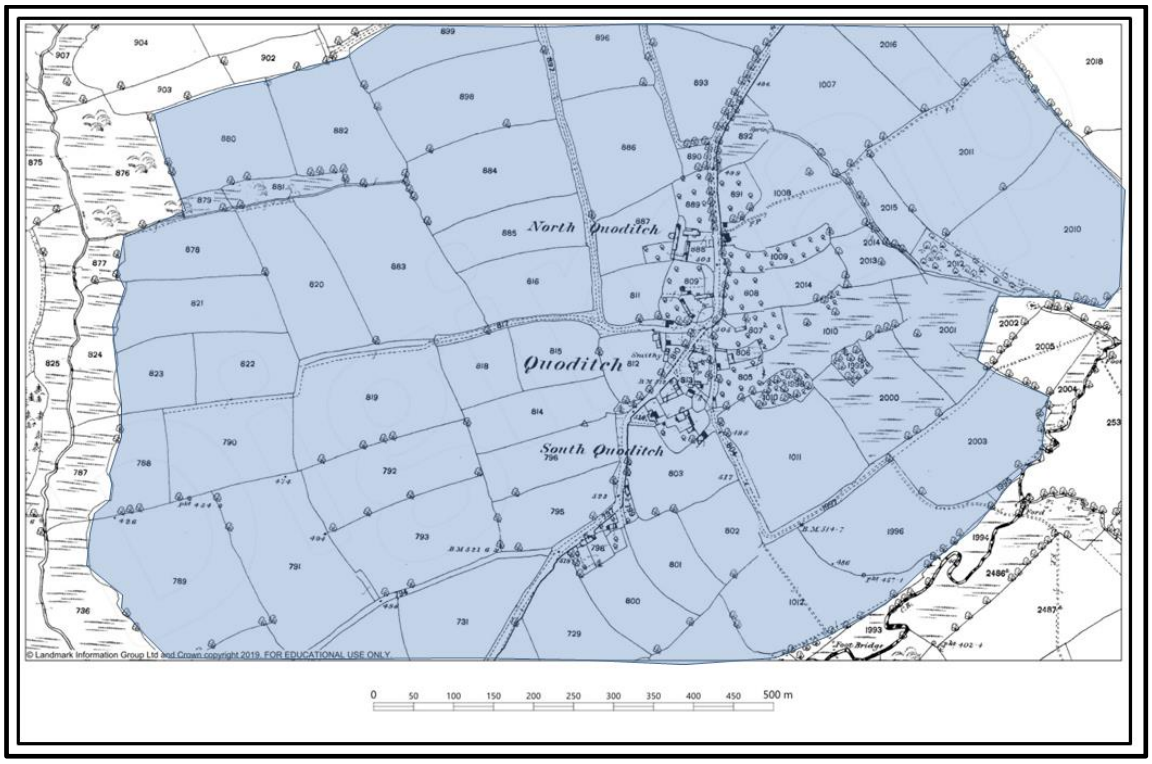


Figure 7.7: Cropping units around the settlement of Quoditch, in the Devon parish of Ashwater. (Digimap: Twenty-five Inch to One Mile OS map of 1885).

An extensive area of cropping units is identifiable around the hamlet of Quoditch, Ashwater, covering a low ridge on the north bank of the River Carey. Fields sharing the same orientation are grouped together and vary in length from 165m to 217m (180-237 yards) and in width from 60m to 105m (65-115 yards) (Figure 7.7).

Semi-regular fields

There are many fields within the local study area which superficially resemble cropping units, in that they are broadly rectangular with slightly curving parallel boundaries on one axis. In most cases, however, the curves in the field boundaries will be less pronounced than those seen with classic cropping units,

and in some cases the shorter axis will exhibit the curve rather than the long. Fields are generally bigger and tend to be located in areas further removed from settlement than is usually the case with cropping units. The landscape survey undertaken in Calstock parish, for the Tamar Valley AONB (Wainright *et al*, 2012, 24), uses the term *semi-regular fields* to denote this form of field. Although they may sometimes be found in association with hamlets, they are also frequently spread across more open areas of landscape, at greater remove from settlement.

Examples of semi-regular fields are found on an area of high ground to the west of the linked farmsteads of Chaddlehanger / Lower Chaddlehanger, in the Devon parish of Lamerton. Some of the larger fields are between 265m and 300m (290-330 yards) in length, with widths of 175-200m (190-220 yards). Both cropping units and strip-based fields are located closer to the settlement, particularly on its eastern side (Figure 7.8).

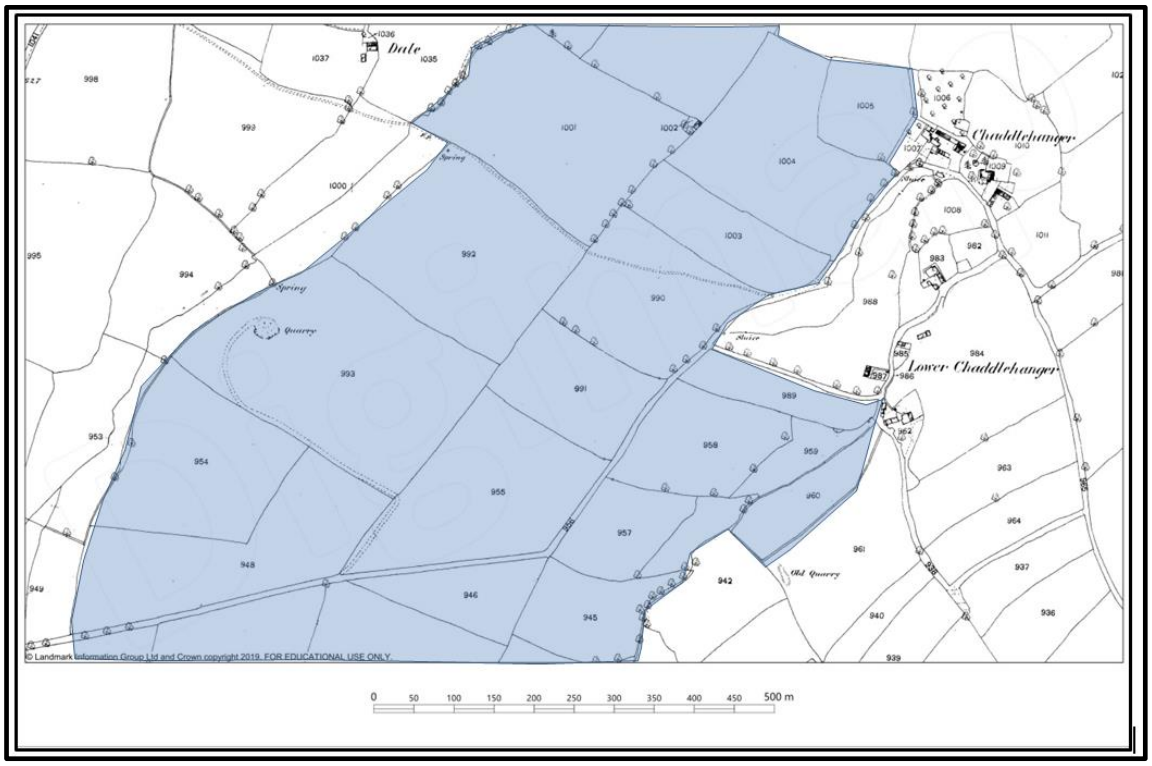


Figure 7.8: Semi-regular fields around the settlement (linked farmsteads) of Chaddlehanger / Lower Chaddlehanger, in the Devon parish of Lamerton. (Digimap: Twenty-five Inch to One Mile OS map of 1884).

Field System Categories

Introduction

Having defined key individual field types of interest the next step was to see how these basic elements could be used to locate and define former open field. This is a complex procedure which also takes into account how the fields fit together as possible open fields and also their relationship to settlement, the road network and to topography. This is made more difficult by the imperfect survival of the evidence; field patterns on 19th-century maps being merely a snapshot in time in what was otherwise a long period of evolution and change. All we can hope to achieve, therefore, is some indication of the possible minimum extent of former open fields in the medieval period, as a full picture is now beyond our reach.

As will become clear, those fields with the best evidence for once having been open field provide a model against which other, less clear, examples may be compared and measured. Some important characteristics are therefore often present. In most cases, there is a direct physical relationship between a settlement and its agricultural land, more often than not with the settlement at the centre of its fields. Roads and lanes radiating out from a settlement will often define a number of discrete larger field units, the fields often with sinuous, outer boundaries marking the limit of farmed land. These putative open fields will commonly be oval or lenticular in shape, a function of the fanning out of the roads with distance from a settlement. In the case of the large-sized hamlet of Metherell, a system of roads and lanes defines fifteen such fields, each subdivided into numerous strip-based fields or cropping units (Figure 7.6). This pattern is followed to varying degrees, and at different scales, in numerous other examples. Where the component individual strip boundaries have not been retained an outer field boundary may therefore provide an indication of the former extent of the open field.

Enclosure of a settlement's open fields was in many cases a piecemeal and complicated process, particularly for the larger settlements where there may have been many individual agreements for amalgamation and exchange of

strips amongst the various occupiers. In such cases, the resulting pattern of fields will very often result in a mixture of strip-based fields and cropping units. Often, however, the better-defined strip-based fields will be closer to the settlement itself, with cropping units and larger, more irregular fields extending further out. This may be either because they are later assarts or because they represent blocks of strips which were withdrawn from the open field at an early date (perhaps representing landlord's demesne). This can be seen in the case of Metherell, where the dominate pattern of strip-based fields is interrupted by cropping units to the north-east of the settlement (Figure 7.6). This blurring of the outer limits of a field system means that even when a former open field has been identified its full extent may not be all that clear. Where there are natural boundaries such as rivers or streams, however, there may be a greater degree of certainty.

Typology

Possible Open Field Category 1

The presence of groups of long narrow fields with curving boundaries in association with a large- or medium-sized hamlet is a good pointer to there once having been an open field present, with strip-based fields predominating. There will often be additional clues to the presence and overall extent of a former open field, determined by the position of a settlement in relation to the fields, the framework of fields created by the local road network, and overall field system shape. Smaller hamlets and farms may also be associated with Possible Open Field Category 1, though in most cases the area covered by the fields will be far less extensive, often restricted to one or two field units.

It may be that in some cases settlement shrinkage has led to a reduction in the number of open field units at an early date, with only the more obvious, later enclosed fields surviving long enough to appear on the 19th-century maps. The large-sized hamlet of Maders, in the Cornish parish of South Hill, for example, is associated with two larger fields with well-defined component strip-based fields. There are, however, two other associated fields with cropping units which may once have been included in the open field system (Figure 7.9).

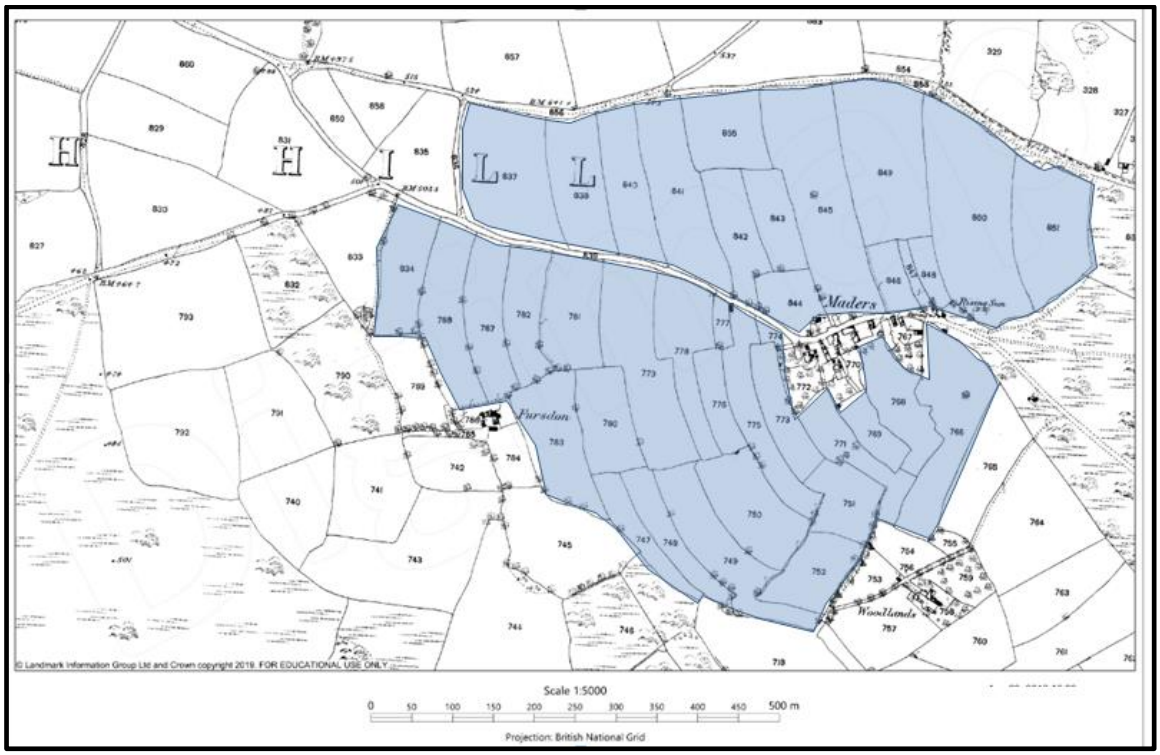


Figure 7.9: Possible Open Field Category 1 around the large hamlet of Maders, in the parish of South Hill, Cornwall. Many strip-based fields are evident, particularly on the south side of the settlement, with some cropping units to the north. All field boundaries curve in the same direction, with the land sloping down to the south. (Digimap: Twenty-five Inch to One Mile OS map of 1883).

Many field systems will comprise a mix of both strip-based fields and cropping units, pointing to more complicated processes of enclosure. Examples include Bowithick, in the parish of Altarnun, which has two large field units either side of a central lane, one of which has strip-based fields and the other cropping units (Figures 7.10 and 10.1). The combination of the two forms of field, however, and the overall structure provides a good level of certainty for these once having been open field.

On a different scale altogether, three of the towns within the local study area – Launceston, Liskeard and Lydford – have extensive Possible Open Field Category 1, though large sections of the fields will inevitably have been lost through modern urban expansion. Taking the case of Launceston, for example, much of the parish of St Thomas the Apostle, extending westwards from the town, is formed of a single, very large tear-drop shaped possible former open field, comprising both strip-based fields and cropping units and occupying a

plateau above the River Kensey (Figure 7.11). The borough of Lydford is also an interesting case. The former town (now village) is situated on land sloping down to the gorge of the River Lyd, with a series of perhaps four to five roughly parallel former open fields on the north-east side of the town, between the settlement and Fernworthy Down. These fields contain many well-defined strip-based fields.

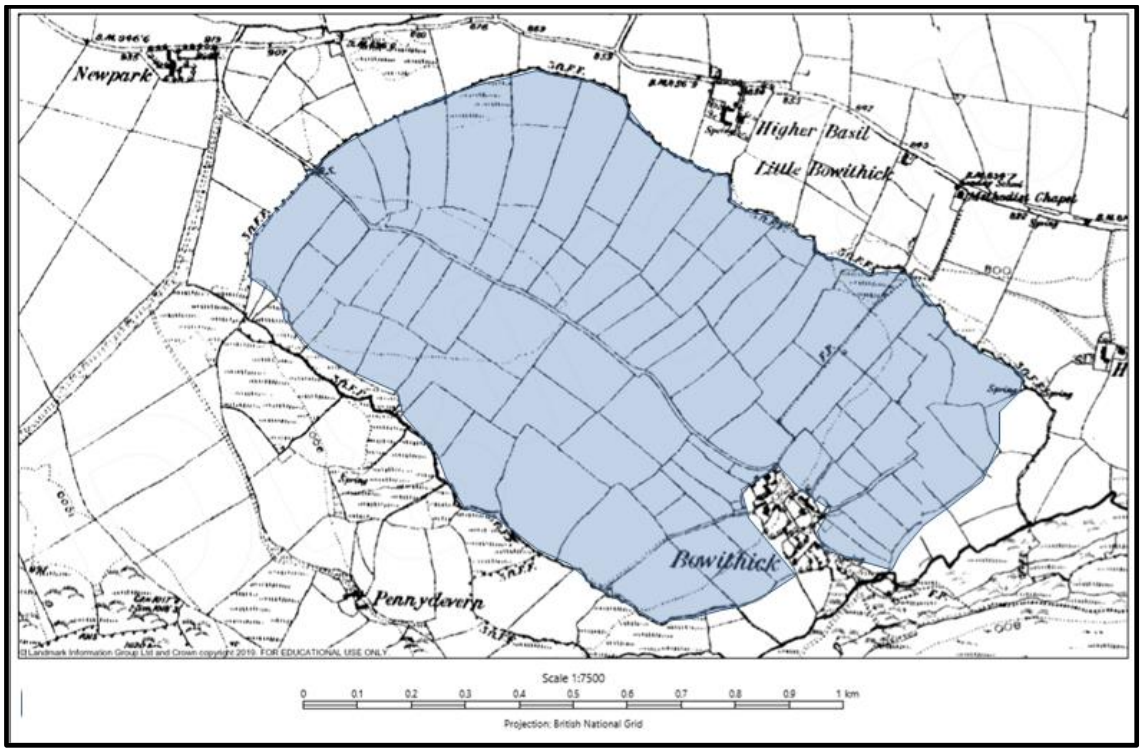


Figure 7.10: Possible Open Field Category 1 associated with Bowithick, in the Cornish parish of Altarnun, just north of Bray Down on the northern edge of Bodmin Moor. Strip-based fields predominate on the north side of the main road through the settlement, with later cross-boundaries added, whilst cropping units are more common on the south side of the road. A plan based on the tithe apportionment is provided in Chapter 10, Figure 10.1. (Digimap: Six Inch to One Mile OS map of 1888).

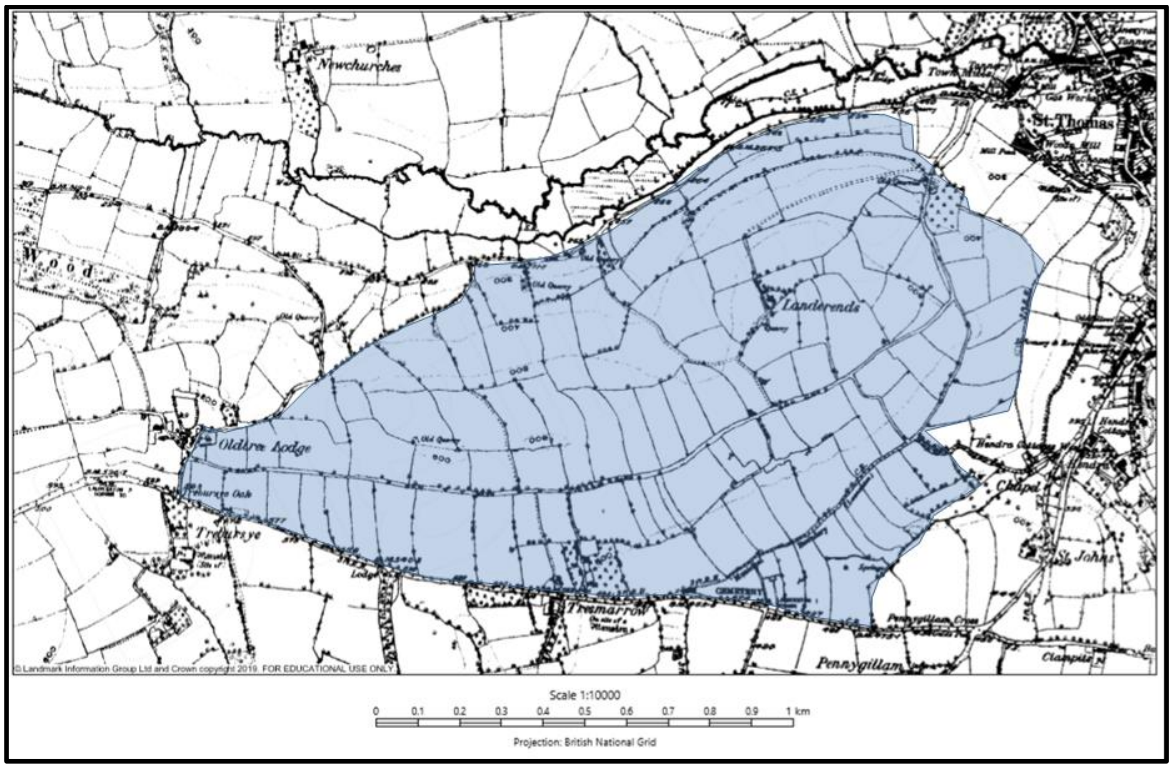


Figure 7.11: Possible Open Field Category 1 to the west of Launceston, occupying much of the parish of St Thomas, comprising a mixture of strip-based fields and cropping units. Many of the fields display a reversed-S profile, suggesting ploughing in two directions, in contrast to the more usual reversed-J profile seen in Cornwall and Devon. (Digimap: Six Inch to One Mile OS map of 1887).

Possible Open Field Category 2

It was considered that field systems which were composed largely of cropping units might also have been derived from former open field, although the degree of certainty was lower, and their different form does suggest slightly different histories of formation to Possible Open Field Category 1. One such system of cropping units is located around the hamlet of Ebsworthy, in the Devon parish of Bridestowe (Figure 7.12). Lanes run east–west and north–south through the settlement, defining two large possible former open fields to the south and four smaller fields to the north of the settlement. The largest cropping units are located in the southern fields, with lengths of between 140m and 280m (155-305 yards) and average widths of 100-120m (110-130 yards). A stream on the east side of the field system divides it from another field of cropping units, associated with the farm of Blatchford in the adjoining parish of Sourton.

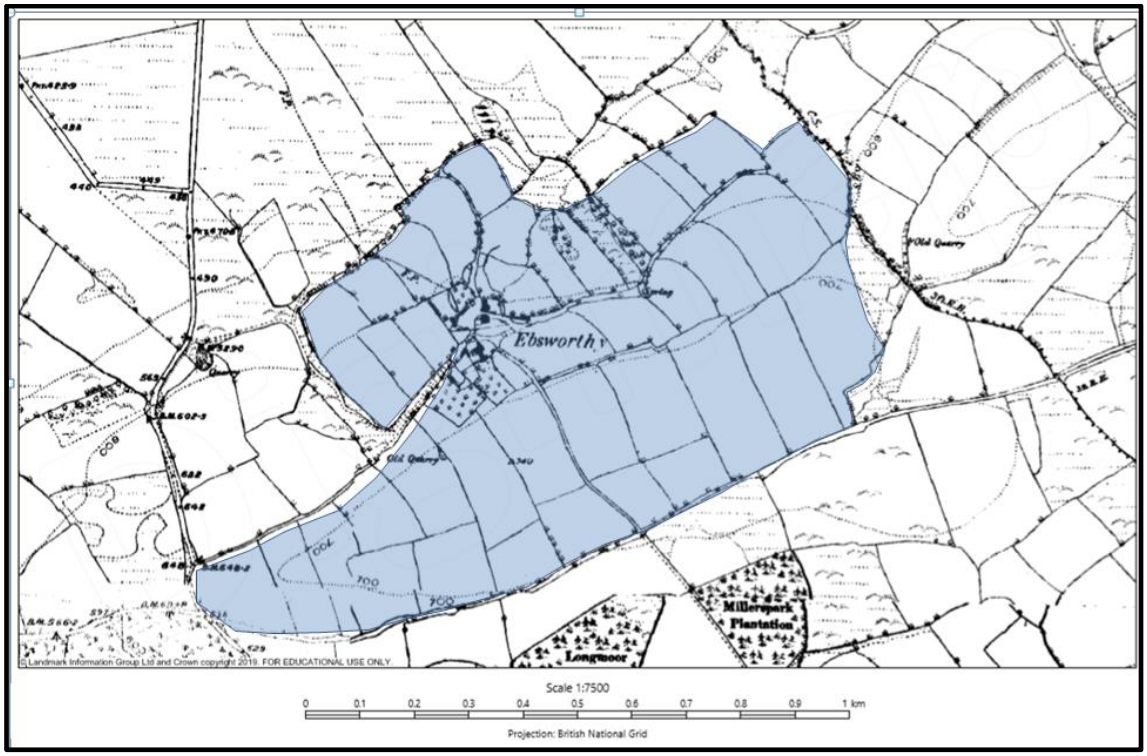


Figure 7.12: Possible Open Field Category 2 *around Ebsworthy, in the Devon parish of Bridestowe. Some strip-based fields are present close to the hamlet itself, but cropping units are more common to the south. (Digimap: Twenty-five Inch to One Mile OS map of 1885).*

Possible Open Field Category 3

Possible Open Field Category 3 fields cover a range of field types where there is less certainty over whether they derive from the enclosure of former open field. The classification does not simply rely on the shapes of the individual component fields, however, but on the overall morphology of the field systems of which they form a part. Semi-regular fields may predominate in some field systems and will often cover wide plateaux areas with less well-defined outer boundaries. An example of this is in the Devon parish of Marystow, on the northern slopes of the Lyd Valley between Alderford, Dippertown, Chelwell and Trehill (Figure 7.13).

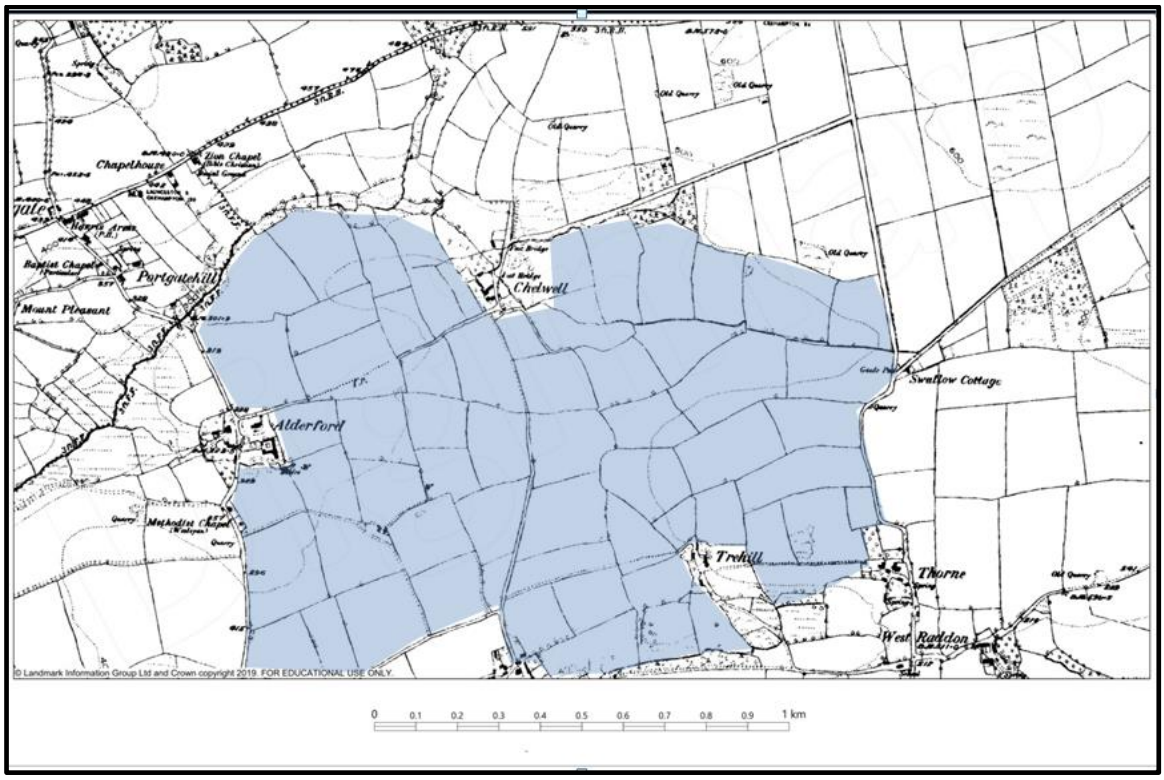


Figure 7.13: Possible Open Field Category 3, lying between Alderford, Chelwell and Trehill, in the parish of Marystow. (Digimap: Six Inch to One Mile OS map of 1887).

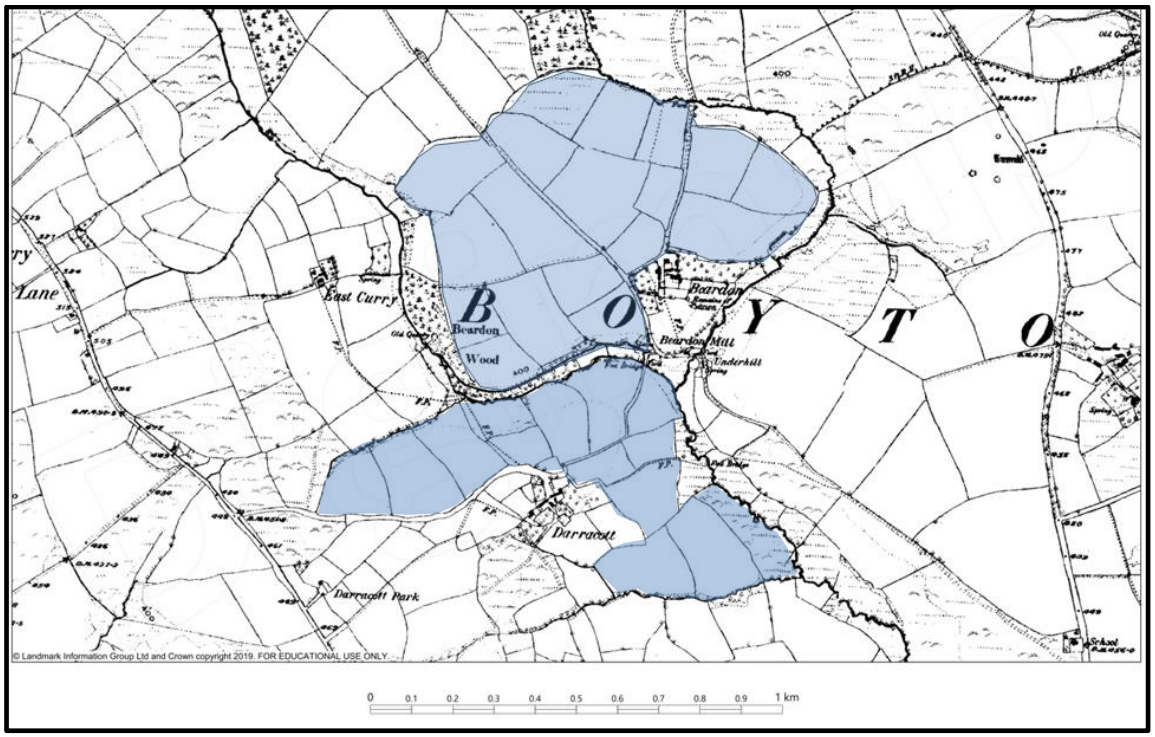


Figure 7.14: Possible Open Field Category 3, at Beardon Barton and Darracott, in the parish of Boyton. (Digimap: Six Inch to One Mile OS map of 1889).

In other cases, field systems of semi-regular fields may be defined by a continuous outer boundary or otherwise defined by streams, often around a large isolated farmstead or small-sized hamlet, superficially resembling cropping units. Examples of this can be seen with the adjacent farms of Beardon Barton and Darracott in the parish of Boyton (Figure 7.14). The difference with Possible Open Field Category 2 is that the constituent fields will tend to be larger. Whilst it was tempting to allocate a number of such field systems to Category 2, there remains a significant degree of uncertainty in doing so. It may by no means be certain, for example, that a large isolated farmstead at the centre of such a field system has not always been a farm, in which case the associated fields have always been held in severalty, perhaps individually rotated along convertible husbandry lines.

Possible Open Field Category 4

Large blocks of fields with a mixture of both strip-based fields and cropping units are found in some moorland fringe locations, often covering very extensive tracts of land. This is particularly evident on the western fringes of Dartmoor, down through the parishes of Sourton, Bridestowe, Peter Tavy and into Tavistock and Whitchurch. Areas of Category 4 fields are also present on the north-eastern edge of Bodmin Moor, for example in the parish of Altarnun, to the south of Fivelanes. The majority of the component fields are rectangular with slightly curving boundaries on the long axes, although groups of strip-based fields are also in evidence (Figure 7.15).

The difficulty with interpretation lies with the very extent of Category 4 field systems and that association between a group of such fields and any particular settlement is problematic. Between Cudlipptown in Peter Tavy and Dennithorne in Whitchurch, an extract of which is shown in Figure 7.15, such field systems are located on very steep terrain. There is also a very clear demarcation between more clearly defined farmland to the west and the steeper slopes of Dartmoor to the east. The Devon HLC defines these as *medieval enclosures based on strip fields* and suggests that they were enclosed in the late medieval period (Turner 2005, 36-8). Given the position of such fields in moorland fringe locations, their extensive nature and their distinctiveness from the layout of

fields in lower lying locations, it is suggested that the majority represent assarting or enclosure of moorland in the late medieval or early post-medieval periods. With some areas of strip-based fields also present, however, it could be the case that some parts were originally established as open fields and were subsequently enclosed along with the surrounding moorland in the later Middle Ages.

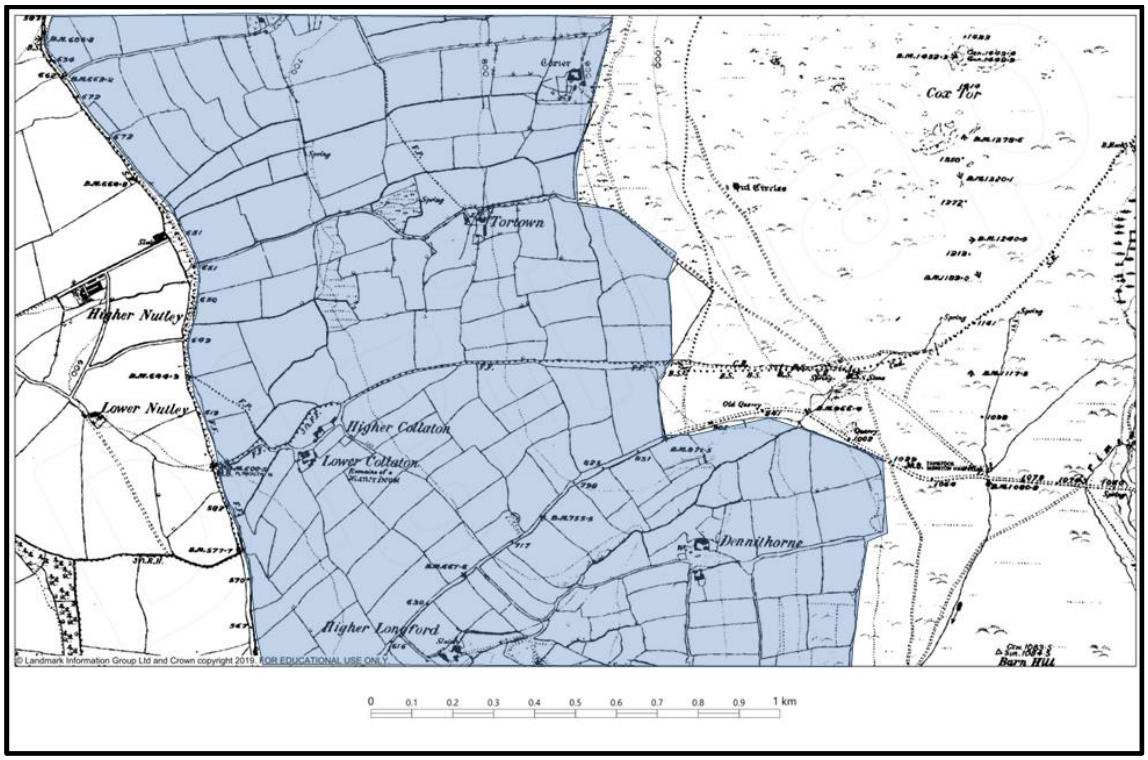


Figure 7.15: Possible Open Field Category 4, in the parish of Whitchurch. The fields display a number of different patterns, resembling both strip-based fields and cropping units. That they occupy a block of land on the lower slopes of Dartmoor would suggest alternative origins. (Digimap: Six Inch to One Mile OS map of 1887).

Distribution of Open Fields

Introduction

The following section takes each of the four field categories discussed above and considers their distribution across the local study area. Some clear patterning was seen, and the discussions therefore follow landscape divisions which seem to reflect the patterning observed.

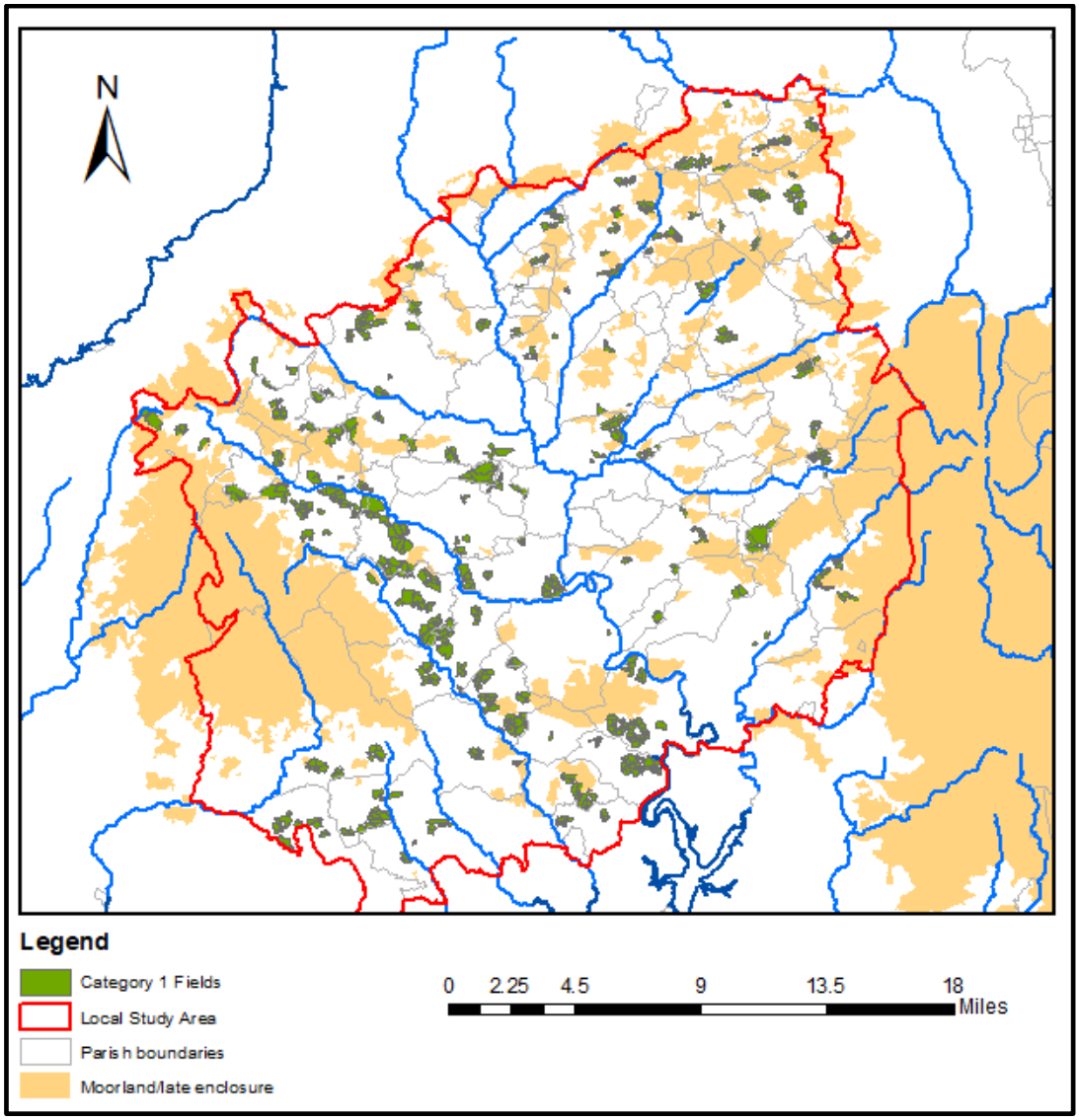


Figure 7.16: The distribution of Possible Open Field Category 1 across the local study area (ArcMap Extract).

Possible Open Field Category 1 (Figure 7.16)

Culm Measures to the north of the Rivers Ottery and Thrushel

The northern section of the local study area, spanning parts of both Cornwall and Devon and corresponding approximately with part of the Culm Measures, has several examples of Category 1 field systems, but, as will be seen, far fewer than was the case in eastern Cornwall to the south of the River Ottery (see next section). To the west of the Tamar, North Petherwin has two Category 1 field systems, associated with Higher and Lower Penrose on the one hand and with Maxworthy on the other. The latter has well-defined strip-based fields,

with some displaying a reversed-S profile. The fields at Maxworthy cover approximately 270 acres and straddle a plateau area defined on the west side by a small stream known as Caudworthy Water. The main axes of the fields follow the slopes, to the north, south and west of the settlement, with a total of perhaps six putative open fields. The adjacent parish of Werrington, however, provides a noticeable gap in the distribution pattern of open fields, with a total absence of Category 1 field systems.

Across that part of the Devon Culm Measures that falls within the local study area, Category 1 field systems tend to follow the main valleys of the rivers Carey and Claw, with a particular concentration in the upper reaches of the River Carey. The interfluves between are often covered by moorland and rough pasture, in part defined on the 19th-century OS maps by late enclosure, and Category 1 field systems are therefore largely absent. The two hamlets of North Beer and South Beer in the parish of Clawton occupy plateaux locations either side of a stream, the former with Category 1 fields covering about 110 acres and the latter of 70 acres. Another split settlement, this time West and East Chilla in Black Torrington, also has two distinct Category 1 field systems of 150 and 90 acres respectively, both on north facing slopes, with the large extent of Halwill Moor to the south and moorland/ rough ground to the north. To the south of these, in the parish of Germansweek, a field system around Eworthy of perhaps five possible open fields, lies on sloping ground on the north bank of the River Wolf, with Sixty Acre Moor, part of Broadbury Ridges, to the south.

Eastern Cornish lowlands between the Rivers Ottery and Lynher

The biggest concentrations of Possible Open Field Category 1 were found in a block of parishes lying between the eastern fringes of Bodmin Moor and the west bank of the River Tamar, mostly between the Rivers Inny and Lynher. This area comprises the parishes of Altarnun, Lewannick, North Hill, Linkinhorne, Lezant, South Hill, Calstock, St Dominick and St Mellion, as well as the southern part of the parish of South Petherwin and the northern part of the parish of Pillaton. A group of smaller parishes between the rivers Inny and Ottery, including Laneast and St Clether, are also included, where open fields would seem to have been smaller in extent but are nevertheless well-defined. The westernmost parishes of this group, including Altarnun, St Clether and

Laneast, lie in a more elevated position, and here there is a clustering of field systems along the valley slopes of the rivers Inny and Lynher.

In the parish of Altarnun, some of the better Category 1 field systems include those associated with Tregue/Trecollas, a combined field system of about 300 acres, and Higher and Lower Tregunnon and Trenarrett, between the south bank of the River Inny and the north bank of Penpont Water, a small stream that runs through Alturnun churchtown, on the north-eastern flanks of Bodmin Moor. To the south and east of Altarnun the landscape becomes more low lying. The parish of Lewannick has well-defined field systems, including those around Polyphant and also around the churchtown itself, where a field system of approximately 400 acres occupies a plateau between the River Inny and the River Lynher. There are also large distinctive Category 1 field systems in North Hill and Linkinhorne, again mainly between the rivers Inny and Lynher. These include field systems around Illand and West Tremollett in North Hill, and Northcombe/Southcoombe, Lewarne and Netherton in Linkinhorne, the former being about 250 acres in extent.

This pattern continues south-eastwards into the parishes of South Hill, with those around the hamlets of Mornick, Maders and Trevigro being the best examples, and to the north-east, in the small parish of Lezant, with Category 1 field systems associated with Higher and Lower Larrick, and also with Rezare. Mornick has a large well-defined system of perhaps 6-7 possible former open fields (Figure 6.7). The slightly elongated shape of the field system follows a ridge line, with a tributary stream of the Lynher on its north-western side. The well-defined Category 1 field system at Rezare is located on slopes leading south towards the River Inny, with the steep wooded slopes of the Tamar Valley on the east side. There are perhaps eight putative open fields divided by a series of lanes, with the fields totalling about 350 acres. Some of the larger strips are 340m (370 yards) or so in length. It is interesting to note that in many cases the churchtowns themselves do not have associated open field systems, even when they are present around other nearby settlements. This is the case, for example, with the churchtowns of Linkinhorne, South Hill and Lezant.

Within a wide eastwards curving loop of the Tamar to the north of its confluence with the Lynher, the parish of Calstock is notable for two of the most extensive well-defined Category 1 field systems, around Harrowbarrow and Metherell (Figure 7.6). Metherell has fifteen putative open fields totalling approximately 390 acres. Strips are narrow and many exhibit a reversed-S profile, with typical examples 2.65m (8-9 ft) wide and 400m (437 yards) long, covering perhaps 3.5-4 acres each. Not far to the south, in the smaller parish of St Dominick, there is a well-defined Category 1 field system between the churchtown and Burraton, approximately 300 acres, with another one associated with Bohetherick, both on ground sloping gently down to the south. In the adjacent parish of St Mellion, three adjoining compact Category 1 field systems at Bealbury, Dunstan and Wollaton are located to the north-west of St Mellion churchtown, that at Bealbury covering approximately 85 acres.

A group of quite small parishes between the rivers Inny and Ottery on the northern edge of this area also provide good evidence for Category 1 field systems, albeit on a much-reduced scale. These are associated with small hamlets and farms and tend to be in slightly elevated positions, and along the Inny, for example, most lie mid-slope between the river and the upland rough pasture. Therefore, in the parish of Treneglos, Higher Scarsick has one small, putative open field, as does Keyrse.

Within this fairly broad area where there is apparently very good evidence for Category 1 field Systems there is a noticeable gap, corresponding approximately with the parishes of Callington and Stoke Climsland. The parish of Callington is dominated by the town itself, which may have exerted some influence on its hinterland, but the absence of evidence for Category 1 field systems in the larger rural parish of Stoke Climsland is interesting, particularly in light of the dispersed settlement pattern identified in Chapters 5 and 6.

South West Devon between the River Tamar and the western Dartmoor fringes

Devon parishes between the River Tamar and the west Dartmoor fringe, to the south of the River Thrushel, have noticeably fewer Category 1 field systems than elsewhere in the local study area. This is particularly the case in the larger parishes of Tavistock, Whitchurch and Milton Abbot, and also the small parishes

of Stowford, Marystow, Coryton and Lewtrenchard, in the Lyd and Lew valleys. There are a small number of exceptions, however, the former borough of Lydford already having been discussed, and another example being Category 1 fields around the linked farmstead of Liddaton in Brentor parish. There are also a number concentrated around the confluences of the rivers Lyd, Thrushel and Wolf, just to the east of the River Tamar, perhaps focussing on the Anglo-Saxon royal manor of Lifton. A good example of a Category 1 field system in this area is found around the hamlet of Cookworthy, on the west side of the River Wolf on land sloping down to the river. There are six putative open fields totalling about 300 acres. Also of note is a Category 1 field system of about 100 acres around Chaddlehanger in the parish of Lamerton, consisting of 3-4 possible former open fields on steep ground on the west side of a stream feeding into the River Lumburn to the south (Figure 7.8).

South of Bodmin Moor and Fowey valley

Along the southern side of Bodmin Moor and in the lowlands to the south and east, the parishes of St Neot, St Cleer, Liskeard, Menheniot, Quethiock and St Ive, there are a limited number of Category 1 field systems. Extensive fields are present around the town of Liskeard itself and in a group of settlements to the south-west. The latter includes the large-sized hamlet of Trevelmond which has a putative open field extending to approximately 70 acres. Two more Category 1 field systems are located around Treworgey and Tremabe, to the north of Trevelmond, with others around Furzenepp in St Ive and Trethinnick, in St Cleer.

Possible Open Field Category 2 (Figure 7.17)

Culm Measures to the north of the Rivers Ottery and Thrushel

With relatively low numbers of Category 1 field systems across the Culm Measures, Category 2 field systems are proportionately more common to the north of the River Ottery in Cornwall and north of the River Thrushel in Devon. Field systems also tend to follow the courses of the major river valleys, such as the Claw, Carey and Wolf. One of the best examples of a field system of this type can be found around the hamlet of Quoditch, in the parish of Ashwater, where there are six putative open fields outlined by six roads and lanes. The

field system of approximately 270 acres is defined on its south-eastern side by the River Carey, and on the north-west by Dury Water, and lies on a low plateau. The larger fields are approximately 220m (240 yards) in length, therefore close to the standard furlong measure, with a typical field of 5 acres (Figure 7.7).

In the parish of Clawton, the settlements of Northbeer and Southbeer on the east bank of the River Claw each have Category 2 field systems, with the two hamlets separated by a stream which feeds into the Claw. Around Clawton churchtown on the west side of the River Claw are a number of connected areas of cropping units, on steep valley sides dissected by narrow coombes and streams, the total area covered is 650 acres. On the Cornish side of the River Tamar, Semersdown in the parish of North Tamerton occupies a ridge, with the settlement just below the summit and facing south. There are four possible former open fields with a total area of about 180 acres.

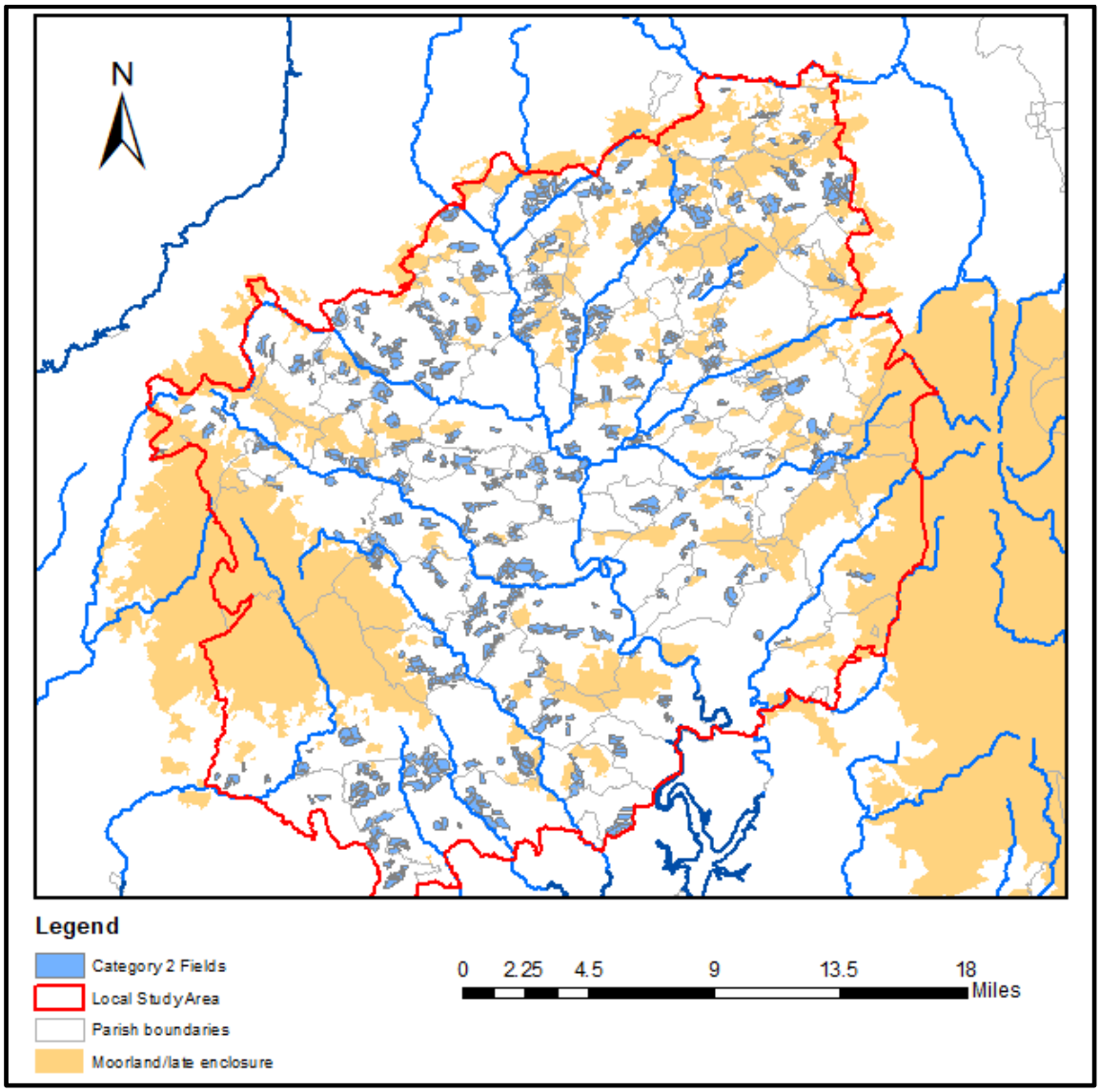


Figure 7.17: The distribution of Possible Open Field Category 2 across the local study area (ArcMap Extract).

Along the southern edge of the Culm Measures and across Broadbury Ridges, a spur of high ground beyond the north-western edge of Dartmoor, evidence for open field is relatively sparse. There is a Category 2 field system around the large isolated farmstead of Breazle, in Bratton Clovelly, which includes a small number of strip-based fields. The settlements of Rexton and Kellacott in the parish of Broadwoodwidger are located on high ground to the north of the River Thrushel, and are associated with two small Category 2 field systems on steep, west facing valley sides leading down to a tributary of the River Wolf.

Eastern Cornish lowlands between the Rivers Ottery and Lynher

Category 2 field systems are present in the east Cornwall lowlands, filling in some of the gaps left by the pattern of Category 1 field systems. For example, the Tamar edge parish of Lawhitton and parts of Lezant and South Petherwin, which are relatively clear of strip-based fields, do have some Category 2 field systems, such as around Trekenner, in Lezant, and Polinnick, in South Petherwin. The same may also be said of Stoke Climsland, which is otherwise similar in terms of topography to the parish of Calstock immediately to the south but lacked Category 1 field systems. In the latter parish, a Category 2 field system on the north side of the churchtown extends westwards to Burraton and also south-eastwards to Climson.

South West Devon between the River Tamar and the Dartmoor fringes

As with Category 1 field systems, Category 2 field systems are relatively sparse to the south of the River Thrushel, although there are a few good examples. Two adjacent field systems present were those of Axworthy, in the parish of Thrushelton, and Great and Little Bidlake, in the parish of Bridestowe. The settlements and their field systems lie on opposing low ridges divided by the River Lew, each being about 190 acres in extent. Fields in the Bidlake system are between 165m (180 yards) and 225m (245 yards) in length, each field covering about 4.5-5 acres.

South of Bodmin Moor and Fowey Valley

Category 2 field systems are also relatively common in those Cornish parishes lying to the south and south-east of Bodmin Moor. Quethiock churchtown and the adjoining settlement of Trehunist are associated with an extensive area of cropping units. The churchtown has a large Category 2 field system following the east bank of the River Tiddy, with a very steep slope down to the river, the field systems extending to approximately 300 acres. Immediately to the south-east, Trehunist is surrounded by a field system of about 200 acres.

One of the most extensive areas of such field systems is found in the parish of Menheniot, between Trengrove and Penhawger, extending southwards to the post-medieval settlement of Merrymeet. To the west, on a hillslope on the west

side of the town of Liskeard, a large Category 2 field system surrounds the large isolated farmstead of Looedown, extending to just over 200 acres.

Possible Open Field Category 3 (Figure 7.18)

Category 3 field systems appear to be relatively more common in the south-west Devon parishes. Perhaps one of the most interesting examples is found in a large swathe of ground between the hamlet of Chaddlehanger and Lamerton churchtown, in the parish of Lamerton. These may be found on land sloping down westwards from the hamlet of Chaddlehanger, which is surrounded by Category 2 field systems, to the Lumburn stream and then up the opposite slope, the sizes of individual fields being in the order of 15-20 acres (Figure 7.8). Some field boundaries continue to the south-east of Lower Chaddlehanger, towards Hurdwick farm, across another deeply dissecting stream. These comprise typical semi-regular fields of 25-30 acres, with some fields as large as 50 acres. Slightly smaller rectangular fields are located to either side of the river, on the lower slopes, being quite regular in form. On the south side of the river they are aligned perpendicular to the slope, which is quite steep at this point, up to the settlement of Ottery.

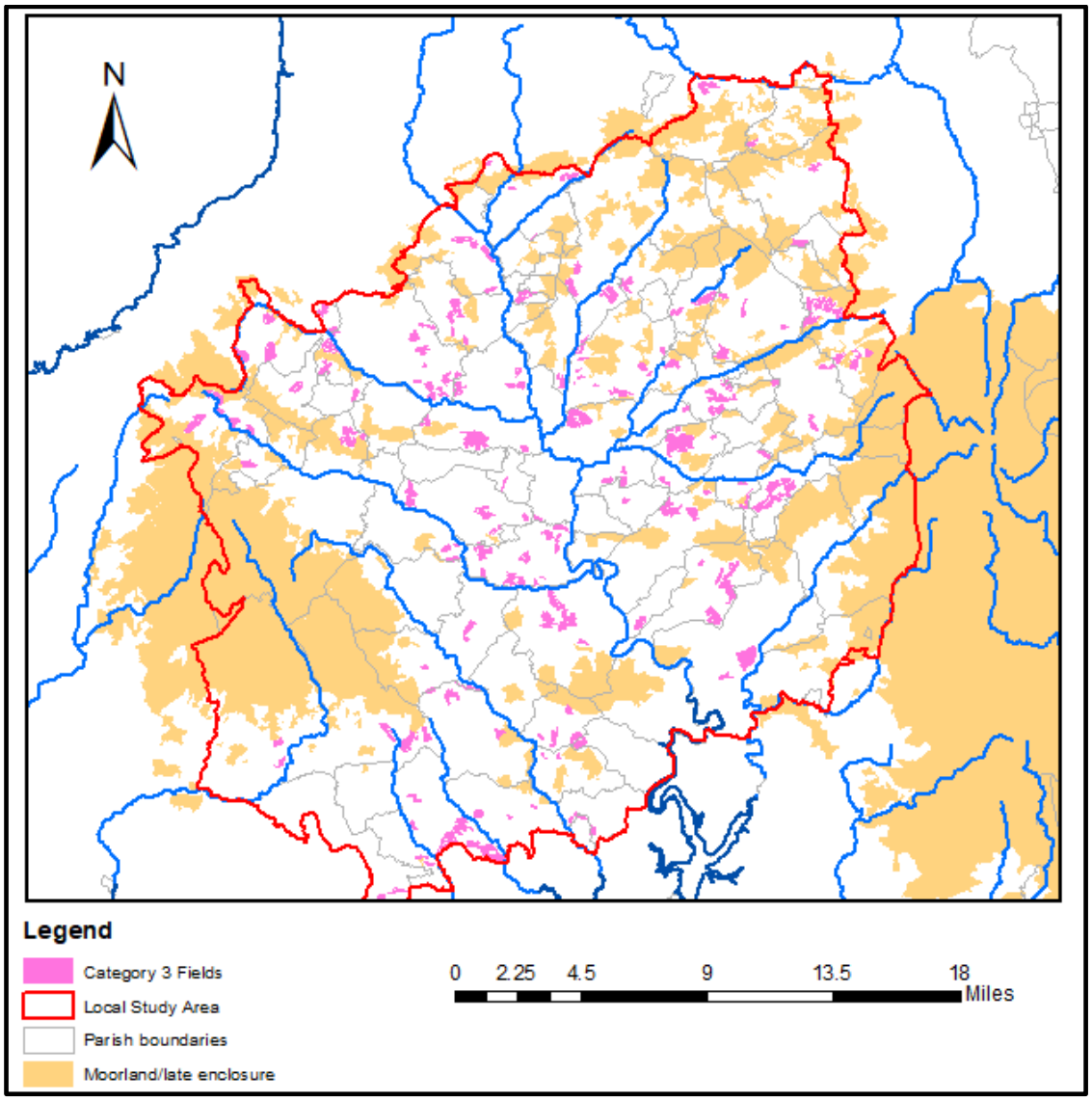


Figure 7.18: The distribution of Possible Open Field Category 3 across the local study area. (ArcMap Extract).

Possible Open Field Category 4 (Figure 7.19)

Category 4 fields are much more limited in terms of their distribution across the local study area. A number are present in Cornwall, along the north-eastern fringes of Bodmin Moor, such as at South Carne in Altarnun, and around Notter and Botternell in Linkinhorne. Along the western fringes of Dartmoor, however, they tend to comprise much more extensive blocks of land. Category 4 fields are particularly prevalent in the parishes of Mary Tavy, Peter Tavy and Whitchurch. In Mary Tavy, Category 4 fields lie to the north of the churchtown, around Blackdown, and to the south and south-west, around Burntown. On the east bank of the River Tavy, in the parishes of Peter Tavy and Whitchurch,

Category 4 fields extend southwards from the churchtown, through Sowtontown, Tortown, Collaton and Moortown, covering an estimated area in excess of 1,500 acres.

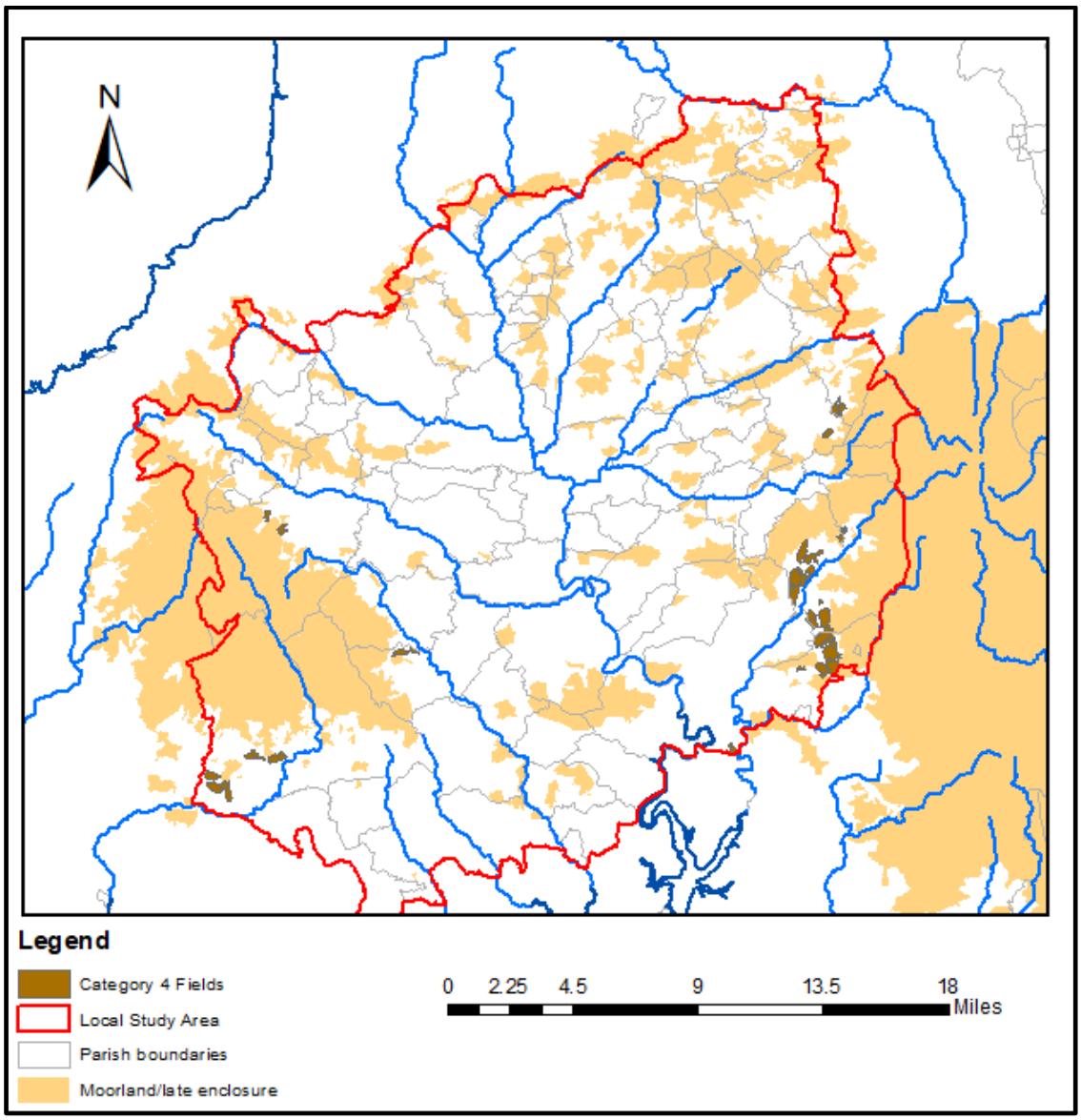


Figure 7.19: The distribution of Possible Open Field Category 4 across the local study area. (ArcMap Extract).

Interpretation of Field System Distribution Patterns

Possible Open Field Categories 1 and 2

The typology of field systems described above was initially based on the degree of confidence that there was in deciding whether a particular field system had

indeed once been open field, and terms such as ‘probable open field’ and ‘possible open field’ (for Category 1 and 2 field systems respectively) were initially used. Under the adopted nomenclature, Possible Open Field Category 1 field systems, for example, are those field systems which are composed largely of strip-based fields, usually regarded as being the best evidence for former open field. Possible Open Field Category 2 field systems, however, tend to be dominated by cropping units, though many will also include a small number of strip-based fields.

Having gone through this process in some detail, it was recognised that Category 2 field systems shared most of the same characteristics as Category 1 field systems. Therefore, both categories generally comprised discrete field systems with sinuous outer boundaries and their constituent fields exhibited parallel curving boundaries on one axis. It was felt, however, that their respective morphologies were sufficiently different for them to remain as separate categories. In essence, where they differed was in the number of field boundaries and therefore the sizes of the constituent fields; both types of field system may therefore provide good evidence for the former presence of open field. That being the case, then their different morphologies and different distribution patterns across the local study area warrant further investigation.

Two possible alternative theories may tentatively be offered as to why these distinctions in field system morphologies have arisen. Firstly, it may be that these differences came about at the point of enclosure, with cropping units representing the amalgamation of many more strips into each field than was the case with strip-based fields. With enclosure by agreement the norm in the South West, rather than the more formal parliamentary enclosure (Yelling 1977, 27), it would be assumed that exchange of strips between occupiers would be easier where there were fewer tenants, that is, smaller settlements, allowing for the creation of larger fields and more continuous holdings. Conversely, equitable agreements between the tenants of larger settlements would be that much harder to achieve, resulting in piecemeal enclosure of fields, and therefore a prevalence of such fields. For this hypothesis to be correct, therefore, Category 1 field systems should be associated with large settlements and Category 2

field systems with smaller settlements. The alternative explanation is that the same processes of enclosure applied to both field forms but that there has subsequently been greater loss of field boundaries over time where cropping units are found, presumably as a result of the gradual amalgamation of holdings in those areas. These themes will be examined in more detail Chapter 10.

Possible Open Field Category 3

Whilst Category 3 field systems can be found across the entire local study area their significance is proportionately greater in those areas which are otherwise lacking in strip-based fields and cropping units. This is particularly the case in those west Devon parishes to the south of the River Thrushel. The most common type consists of large swathes of countryside, often at slightly elevated levels, covered with semi-regular fields. Interpreting the formation processes which lie behind Category 3 field systems is important in the light of Finberg's (1951; 1969a) work on Tavistock Abbey, as he presented documentary evidence to suggest that open field had been a characteristic of Tavistock Abbey estates in the medieval period (see Chapter 9). If this is correct – that open field had been present across the south-west Devon parishes – then there has been a greater subsequent alteration to the morphology of the landscape here than was seen elsewhere in the local study area.

Possible Open Field Category 4

The location of Category 4 fields on the edges of Bodmin Moor and Dartmoor, on generally steep ground above lower lying farmland associated with established settlements, would seem to point to colonisation of moorland fringe areas. The on-line version of the Devon HLC (Devon Environment Viewer), when interrogated, suggests in a number of cases that this represents enclosure of former open field. In certain parts, strip-based fields are present, and open field may therefore have existed in these areas, albeit fairly restricted in extent. Across most of the west side of Dartmoor, however, blocks of more irregular fields are present, and it may be that enclosure took place directly from the moor and incorporating and enclosing small areas of open field.

Open field and boroughs

There is good evidence for former open field around most of the towns in the local study area. Four towns had borough status during the medieval period, they being Launceston, Liskeard, Lydford and Tavistock (Beresford and Finberg 1973). In the case of Launceston, Category 1 field systems are particularly extensive, with a very large field to the west of the town (in the parish of St Thomas-the-Apostle), as well as more fragmentary fields to the south and east, where they have been obscured by more modern urban development. There is also very extensive evidence for former open field around Liskeard, on all sides of the town. For Tavistock, the evidence is more fragmentary, with urban expansion removing most traces of former open field, except on the north side of the town. Well-preserved Category 1 field systems are present around Lydford, and have been illustrated on a number of occasions (for example, Shorter *et al* 1969, fig.28, 114). The level of preservation at Lydford reflects the declining fortunes of the town (now a village), and the lack of subsequent development.

Table 7.1: Towns within the local study area with Borough status (Beresford & Finberg 1973) and market charters (Letters 2003).

Town/settlement	**Borough**	**Market Charter**
Cornwall		
Launceston	Domesday 1086	Originally St Stephen.
Liskeard	Charter of Richard, Earl of Cornwall 1240	
Callington		Henry III to Reginald Ferrariis, 1267.
Lawhitton		Edward II to Walter, Bishop of Exeter, 1311.
Menheniot		Henry VII to John Trelauny, 1487.
Devon		
Lydford	Burghal Hidage	
Tavistock	c.1185	Granted to abbot 1105
Black Torrington		Granted to Roger la Zuche 1219.
North Brentor		Henry III to John A of Tavistock, 1232.

English Medieval Boroughs Beresford and Finberg 1973

Gazetteer of Markets and Fairs in England and Wales to 1516 s. Letters 2003

The evidence for former open field associated with Launceston, Liskeard and Lydford is well-documented and may have contributed to earlier assertions that open field in the South West was an essentially urban phenomenon (for example, Rowse 1941, 35-6). It has also been noted that many smaller boroughs in the South West were also associated with open field, as was the case with Bere Alston (Rippon *et al* 2009). Although not a borough, Callington was granted a market charter in 1267. Evidence for associated open field would seem to be restricted to Category 2 field systems to the south-west of the town, associated with Frogwell, with more limited areas to the north-west and south-east. Other settlements in the study area which were granted market charters include Lawhitton (1311) and Menheniot (1487) in Cornwall, and Black Torrington (1334) and North Brentor (1232) in Devon (Letters 2003; and Table 7.1). Of these, Lawhitton has no associated putative open field, Menheniot has some Category 2 fields, whilst both Black Torrington and North Brentor are associated with Category 1 field systems.

Looking beyond the confines of the local study area, the town of Okehampton, just to the east of the north-eastern Devon parishes, which also had borough status, exhibits some very good evidence for strip-based fields and also cropping units, extending some way out of the town in different directions.

Discussion

The objective of this chapter has been to identify evidence for the presence of former open field in Cornwall and Devon, to plot its distribution across the local study area, and to offer preliminary explanations for the different morphologies and distribution patterns identified. By looking at field boundary shapes as represented on the First Edition Six Inch to One Mile Ordnance Survey maps, a range of field shapes, which previous studies have indicated may be the product of enclosure of former open field, were described. These comprised strip-based fields and cropping units, to which a third type was added, designated semi-regular fields.

The next stage was more complex and involved looking at the interconnection of these field types with settlements, the road network and topography. Using this information, and based on the level of confidence in each case, four categories of field system were identified as being of interest. It was concluded that the first two categories (Possible Open Field Categories 1 and 2) were both likely to have been derived from former open field, albeit formed via different processes. Possible Open Field Category 3 was thought less likely to represent former open field, although there was sufficient variation to suggest the possibility in some cases. It was concluded that Possible Open Field Category 4 was largely derived from enclosure of moorland fringe. It is emphasised, however, that this exercise did not attempt to definitively identify all former open field that there may once have been within the local study area, or even to define the full extent of those field systems which have been identified. It is considered, however, that the evidence is of a sufficient quality to give a sense of its former distribution.

The next step was to describe the distribution patterns of the four categories of field system as they appear across the local study area. Without yet offering possible detailed explanations for the patterns observed some general observations may usefully be made at this stage. Firstly, the densest concentrations of Category 1 and Category 2 field systems were seen to be in the area along the eastern flank of Bodmin Moor, along the rivers Inny and Lynher, and in the lower lying undulating landscape between the two rivers and the west bank of the River Tamar. The landscape to the east of the Tamar at this point is broadly similar in terms of physical characteristics, and yet there is not the same kind of evidence for former open fields that we see in the Cornish parishes to the west. It was also noted that there are gaps in the pattern of open fields, corresponding with the Cornish parishes of Callington, Stoke Climsland and Werrington.

It was also seen that the northern section of the local study area, which corresponds broadly with part of the Culm Measures, exhibits some internal consistency in the field patterns observed across both Cornwall and Devon, with a greater preponderance of Category 2 field systems over Category 1 field

systems. The last section has looked at possible reasons for differences in morphology between the different forms of field system observed. It is suggested that Category 1 and Category 2 field systems both probably derive from former open field and that the differences most likely result either from processes of enclosure or the subsequent loss of field boundaries between the late medieval period and the mid-19th century. It was also proposed that Category 3 field systems may have resulted from more than one process, with the possibility that some may have been open field.

Although essentially a study of the rural landscape the presence of urban centres within the local study area could not be overlooked. Inevitably, not only will they have exerted some influence on the economies of surrounding settlements but three of the towns, Launceston, Liskeard and Lydford, have particularly good evidence for former open field surrounding them. This should come as no surprise, given the earlier claims of some historians such as Henderson and Rowse, that open field in Cornwall was an essentially urban phenomenon. As has been noted at several points in this chapter, patterns of possible former open field are not dissimilar to areas where greater nucleated settlement were identified in Chapter 6. The correspondence is not total, however, and these themes will be explored more fully in Chapter 8.

8

Settlement and Open Field

Integration of Settlement and Open Field Evidence

Introduction

Having separately examined variation in settlement patterns and distribution across the local study area, as well as the incidence of possible former open field, the principal aim of this chapter is to integrate the results of the two strands of evidence to allow for the definition of discrete historic landscape character areas. These will then be used in the chapters which follow to assess the relative contributions of human as opposed to physical environmental influences on the formation of landscape character.

The approach taken was to begin by making a visual assessment of the various settlement types against Category 1 and 2 field systems. This would form the basis of identifying a series of provisional historic landscape character areas which could then be tested statistically. Setting definite boundaries for each area would be difficult to achieve, however, with a graduation in the densities of settlement and of field systems across the local study area. Because the analyses of both settlement and former open field distributions in Chapters 5-7 were undertaken within the framework of ecclesiastical parishes, this methodology was continued for the current exercise. The rationale behind this approach is that ecclesiastical parishes are reflective of local political structures and can be traced back into the High Middle Ages.

The first part of the analysis led to the provisional identification of four relatively distinct areas. The areas identified were: the northern part of the local study area, approximately to the north of the Rivers Ottery and Thrushel; east

Cornwall between the Rivers Ottery, Lynher and Tamar; south-west Devon south of the River Thrushel; and south Cornwall, to the south-west of the River Lynher. It should be noted that neither Bodmin Moor nor Dartmoor were separated out, even though settlement, and also former open field, were sparse across the moors. This was because, with analysis based on the structure of ecclesiastical parishes, those parishes encompassing tracts of moorland also generally included lower-lying areas with settlement and open field. Descriptions are therefore structured to reflect these 'provisional' historic landscape character areas and are part descriptive and part observational. Raw counts of the different settlement types which are associated with either Category 1 or 2 field systems are also given, on an area basis.

The second part of the chapter sets out to assess the validity of these provisional historic landscape character areas, with summaries of the distributions assessed statistically and the results contectualised against brief descriptions of the topography, geplogy and soils. The final section of the chapter compares the historic landscape character areas with the *pays* identified in Chapter 3.

Large-sized Hamlets and Category 1 Field Systems (Figure 8.1; Table 8.1)

As previously discussed in Chapter 7, it has been a common-held assumption that strip-based field systems are more likely to be found in association with larger settlements, the greater fragmentation of landholding reflecting more complicated arrangements made between occupiers at the point of enclosure (for example, Herring 2006a, 60-1). Theoretically, enclosure of open fields may be more piecemeal, and the resulting fields are therefore more likely to mirror the pattern of the original strip fields. In order to investigate this proposition within the local study area, the first step was therefore to compare the distribution of large-sized hamlets with Category 1 field systems, that is, those field systems dominated by strip-based fields. The following discussions are structured around the provisional historic landscape character areas and the results of this analysis are summarised in Table 8.1.

North of the Rivers Ottery and Thrushel

Across the northern part of the local study area there are moderate numbers of large-sized hamlets / developed churchtowns overall, with a total of twenty-one split between nineteen parishes (1.11 per parish). There is also less evidence for Category 1 field systems than was the case with the east Cornwall parishes. Therefore, nine of the settlements have some association with a Category 1 field system (five large-sized hamlets and four developed churchtowns), none of which are very extensive. Higher Prestacott in the parish of Ashwater, for example, is a large-sized hamlet just to the north-east of the churchtown and to the south of the hamlet of Quoditch. The settlement is on slightly elevated ground on the north bank of the River Carey, with a Category 1 field system lying between the settlement and the river.

Central / Eastern Cornwall between the Rivers Ottery and Lynher

The results of Chapters 6 and 7 indicate clustering of large-sized hamlets and also of Category 1 Field Systems in a series of parishes lying between the eastern edge of Bodmin Moor and the west bank of the River Tamar, with a total of twenty-five parishes (excluding the urban parish of St Mary Magdalene in Launceston). The northern boundary corresponds with the River Ottery, with many of the parishes following the courses of the Rivers Inny and Lynher. Within those parishes lying to the south of the River Ottery there are a total of fifty-three larger hamlets, if developed churchtowns are included (of which there are sixteen), twenty-nine of which are associated with Category 1 field systems (twenty-four with large-sized hamlets and five with developed churchtowns) (Table 8.1).

A number of such associations are evident within the local study area. Therefore, in the Cornish parish of Lewannick, the large-sized hamlet of Polyphant, located on the southern slope of a tributary of the River Inny, has an extensive strip-based field system surrounding it, extending up the slopes of the valley. In the same parish, an extensive tract of interconnecting strip-based fields is present between Lewannick churchtown and the large-sized hamlets of Trevadlock and Trenhorne, covering a wide plateau and slope on the north side of the River Lynher. Two other obvious good examples already referred to

surround the large-sized hamlets of Harrowbarrow and Metherell, in the parish of Calstock (Figure 7.6). In the case of Metherell, in 1337, for example, there is documentary evidence to show that there were fifteen separate holdings (Herring 2006a, 60).

The association is perhaps more significant than these figures would suggest, as many churchtowns have no association with Category 1 field systems, even when nearby hamlets do have such a link. For example, in the Cornish parish of Altarnun the churchtown is not associated with Category 1 field systems, whilst there is one located around the nearby large-sized hamlet of Trewint.

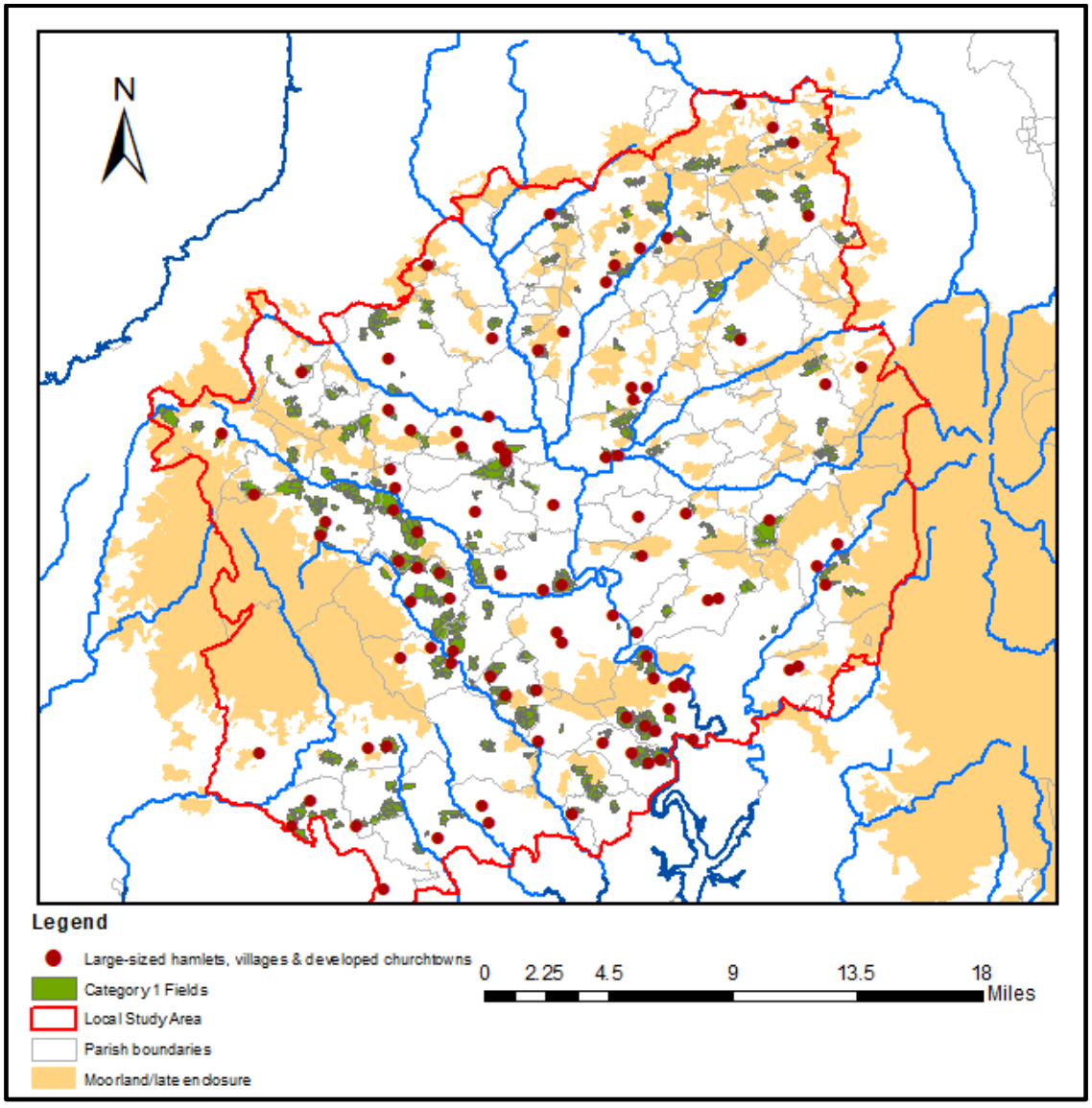


Figure 8.1: Distribution of large-sized hamlets and Category 1 field systems within the local study area. (ArcMap Extract).

South-west Devon to the south of the River Thrushel

Although there are some large-sized hamlets in Devon to the south of the River Thrushel there is limited association with Category 1 field systems (Table 8.1). This group comprises twenty parishes, with a total of fourteen large-sized hamlets / developed churchtowns (five and nine respectively). Of these, two large-sized hamlets and two developed churchtowns are associated with Category 1 field systems. The two large-sized hamlets could, however, be associated with assarting of moorland. Therefore, on the eastern slopes of the prominent granite outcrop of Brentor, and associated with the settlement of North Brentor (actually within the parish of Lamerton), there is quite an extensive network of strip-based fields. This is quite uneven ground, dipping down steeply to the east to the River Burn, with moorland rising steeply beyond that, onto the lower slopes of Dartmoor. Another example of note is that of the churchtown of Peter Tavy and the nearby small-sized hamlet of Cudlipptown, to its north, located on the western fringes of Dartmoor. The churchtown is located on the east side of the River Tavy, where a side valley, the Colly Brook, enters the river. The slopes of both valley and side valley are very steep, rising north-east up onto Smeardon Down. There is, however, a defined series of curving, narrow fields, with those at the northern end apparently associated with Cudlipptown, formerly a detached portion of Tavistock. This is rough, stony ground, more akin to the land around a moorland settlement such as Brown Willy, rather than a lowland settlement.

South Cornwall to the west of the River Lynher

On the southern Bodmin Moor fringe, and in the gently rolling farmland to the west and south-west of the River Lynher, there are fewer large-sized hamlets, with a total of nine in an area which is covered by six parishes (Table 8.1). These comprise five large-sized hamlets and four developed churchtowns. There is also limited evidence for strip-based fields. With the obvious exception of the borough of Liskeard itself, three large-sized hamlets have an association with Category 1 field systems. There is a concentration of large-sized hamlets in

the wider parish of Liskeard, to the south, including the hamlets of Lamellion, Trevelmond and Trewidland. Trevelmond, for example, is associated with a Category 1 field system, lying on gently sloping ground overlooking a stream to the west, a tributary of the West Looe River.

Large-sized Hamlets and Category 2 Field Systems (Figure 8.2)

Large-sized hamlets may also be associated with Category 2 field systems, but their numbers are generally fewer (Table 8.1). Eleven large-sized hamlets / developed churchtowns were found associated with Category 2 field systems in the northern part of the local study area, with fourteen in east Cornwall, three in south-west Devon and four to the south of Bodmin Moor.

Numbers across the northern part of the local study area were therefore fairly moderate. Perhaps one of the best examples, however, is that of the large-sized hamlet of Quoditch, in the parish of Ashwater, a large linear settlement extending along a south-west – north-east aligned ridgeline, lying at between 130m and 150m AOD. The alignment of the settlement is parallel to the west bank of the River Carey, immediately to the east, and is located to the north-east of Ashwater churchtown, with the road following the line of the ridge. Two large putative open fields are located to either side of the road with the distinctive patchwork quilt pattern of cropping units / furlongs very easy to pick out, and joining with the equally well-defined Category 2 field system associated with Blagaton, immediately to the north-east (Figures 7.7 and 8.2). Today, the settlement has an almost deserted feel about it, surrounded by heath and marshy ground, particularly between the hamlet and Higher Prestacott, to the south-west.

Figure 8.2: Farmhouse at Quoditch, Ashwater. Buildings are now distributed at intervals along the main road through the hamlet, with the illustrated example now going by the name 'Middle Quoditch'. (Photograph - author).

Within the east Cornwall lowlands, however, there are few such associations between large-sized hamlets and Category 2 field systems (fourteen of fifty-three settlements having an association), with the majority associated with strip-based fields. One important exception is that of the churchtown of Stoke Climsland, where extensive fields of cropping units are located to the west, east and south-east of the churchtown. For south-west Devon to the south of the River Thrushel, there are four large-sized hamlets / developed churchtowns and a small number which are associated with Category 2 field systems, Meadwell in the parish of Kelly being one prominent example. The smaller number of parishes lying on the south side of Bodmin Moor also show some limited association between large-sized hamlets / developed churchtowns and Category 2 field systems, with four of nine settlements showing an association. This includes the large-sized hamlet of Trewidland, in Liskeard parish.

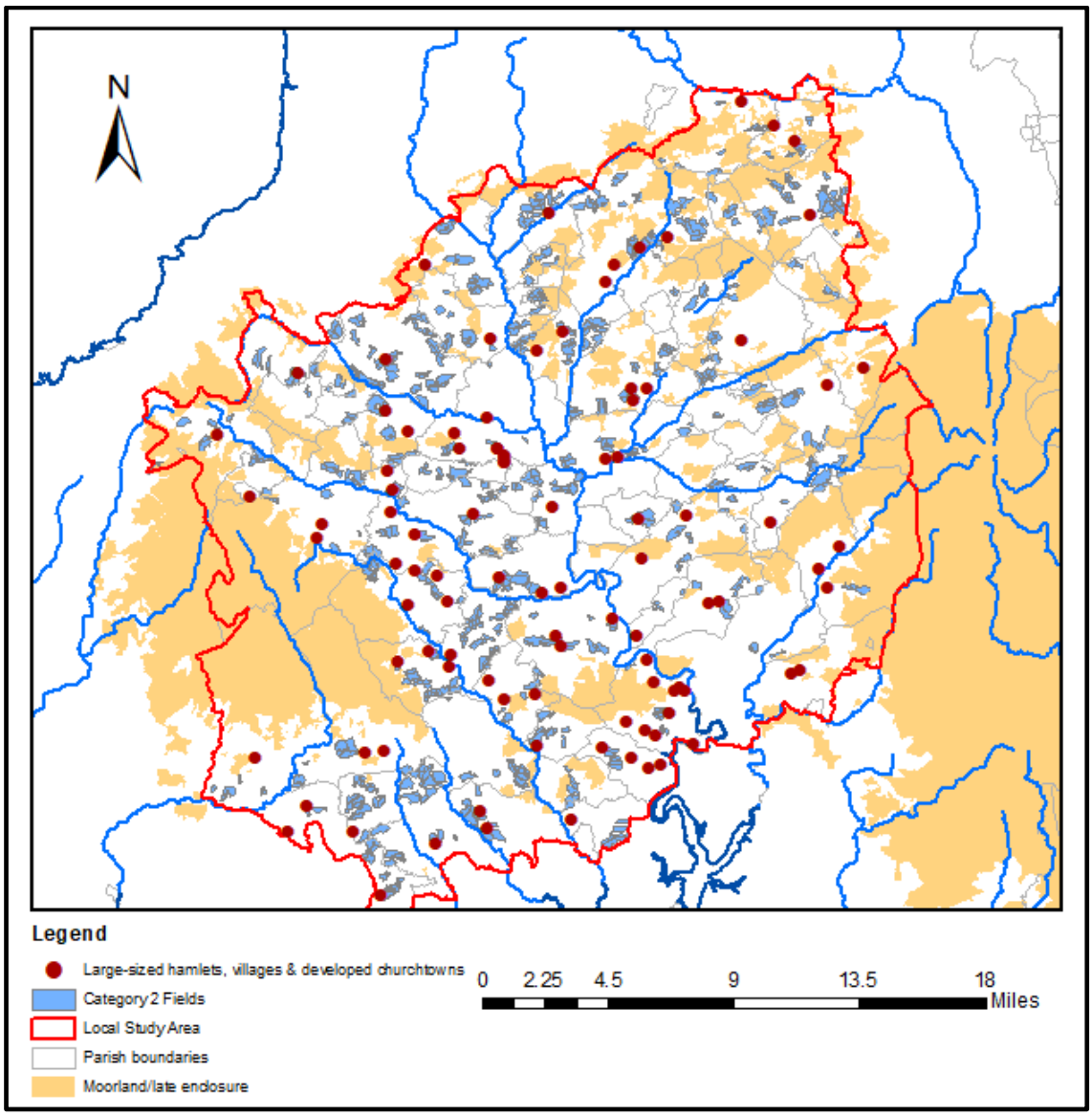


Figure 8.3: Distribution of large-sized hamlets and Category 2 field systems within the local study area. (ArcMap Extract).

Large-sized Hamlets without Category 1 or 2 Field Systems

It should be said that not all large-sized hamlets are associated with either Category 1 or Category 2 field systems, particularly in the case of developed churchtowns. These include the developed churchtowns of St Neot and Menheniot, the former situated in quite steep terrain on the edge of Bodmin Moor and the latter in lower, rolling countryside to the east, with also Lawhitton, on the west bank of the Tamar, and Sydenham Damerel and also Ashwater, on the east bank of the river. The churchtown of Lezant has no such association with Category 1 or 2 field systems, whilst the large-sized hamlet of Rezare, to

the south-east, and Higher and Lower Larrick, to the south-west, both have very good examples of Category 1 field systems surrounding them.

Medium-sized hamlets and Category 1 and 2 Field Systems (Figure 8.4)

Medium-sized hamlets to some extent follow a similar distribution pattern to that of large-sized hamlets, with the densest concentrations seen in the east Cornwall lowlands, though also with slightly elevated numbers across the Culm Measures and in the south-east Cornwall lowlands. Table 8.1 indicates that many are associated with either Category 1 or Category 2 field systems across most of the local study area, with the exception of the south-west Devon parishes.

North of the Rivers Ottery and Thrushel

Across the northern part of the local study area medium-sized hamlets are more often found in association with Category 2 than with Category 1 field systems. Therefore, whilst seven medium-sized hamlets are associated with Category 1 field systems, seventeen are associated with Caregory 2 field systems. In the parish of Clawton on the Culm Measures, and immediately to the east of the churchtown, for example, are the medium-sized hamlets of Northbeer and Southbeer, separated from one another by a small stream, each with their own, quite extensive Category 2 field system. On the 1885 1:2500 OS map, Southbeer appears still to have been a hamlet, but both settlements are now single farms.

Central / eastern Cornwall between the Rivers Ottery and Lynher

In the central-east Cornwall parishes, medium-sized hamlets may be found with either Category 1 or Category 2 field systems, with seventeen associated with Category 1 field systems and another seventeen with Category 2 field systems (Table 8.1). Trecollas in the parish of Altarnun is a medium-sized hamlet set within an extensive Category 1 field system, with the small hamlet of Tregue to the west apparently sharing the same field system. The combined field systems are on slightly elevated ground between the River Inny, to the north, and Penpont Water, to the south and between them cover approximately 300 acres. Both settlements would seem to be of some antiquity, with Tregue first recorded in 1302 and Trecollas in 1350 (Glover 1948, 47). In the far south of the local

study area, St Mellion churchtown has no open field associated with it, whilst three medium-sized hamlets to the north-west of the settlement, Wollaton, Dunstan and Bealbury, all do have Category 1 field systems.

In the middle and upper reaches of the River Lynher, a number of medium-sized hamlets are not associated with either Category 1 or Category 2 field systems, one example being Trebartha in the parish of North Hill. Trebartha was in fact a Domesday manor, the later medieval house replaced by a large mansion in the 18th century.

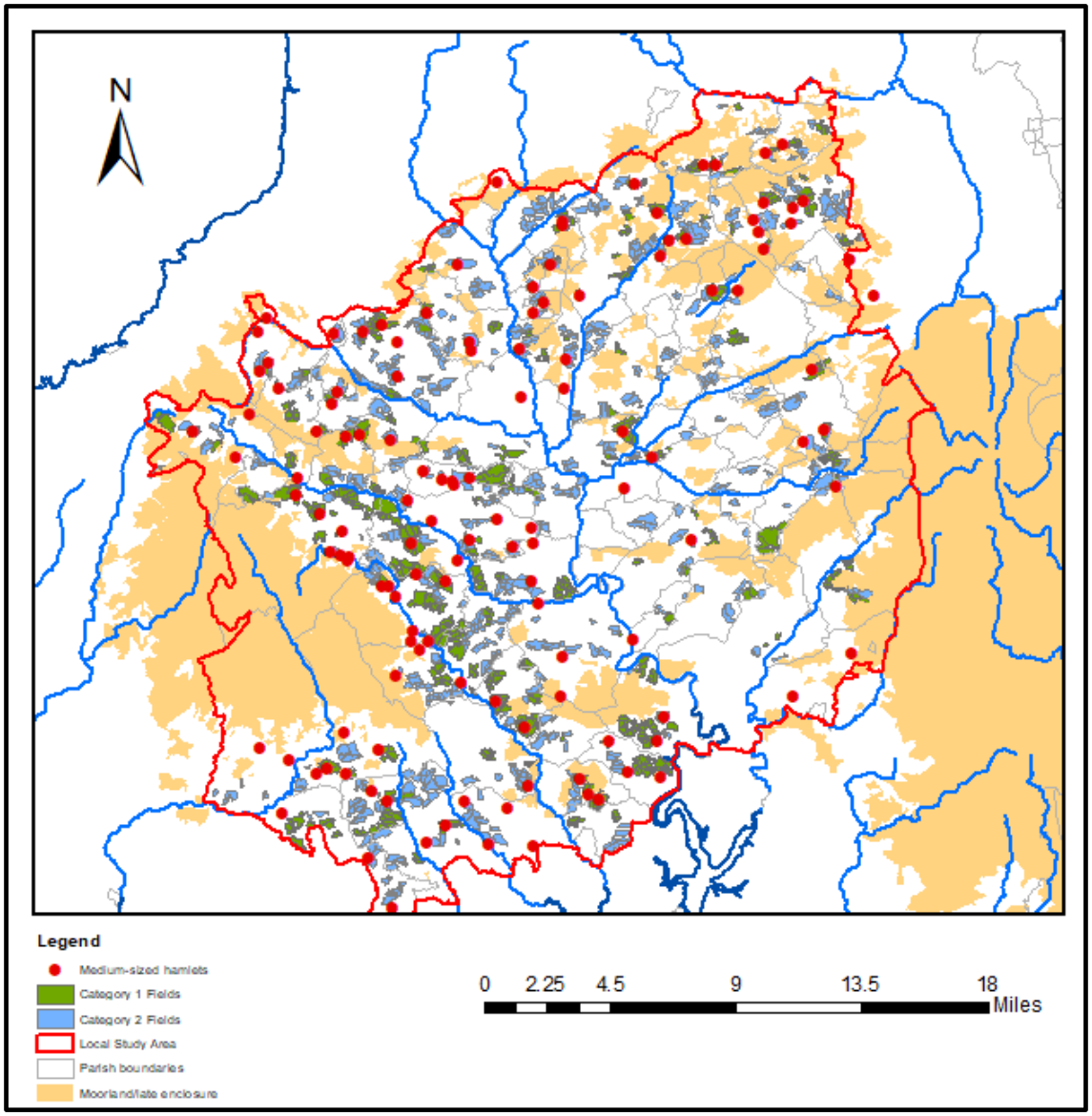


Figure 8.4: Distribution of medium-sized hamlets shown in association with Category 1 and Category 2 field systems. (ArcMap Extract).

South-west Devon to the south of the River Thrushel

There are a small number of medium-sized hamlets on the east side of the Tamar below the River Thrushel, totalling fourteen settlements across the twenty parishes, with most having no associated Category 1 or 2 field systems (three with Category 1 and one with Category 2). Cudlipptown has already been mentioned, associated with a Category 1 field system which extends to the churchtown of Peter Tavy. In the parish of Milton Abbot, for example, the medium-sized hamlets of Uppaton and Quither, which lie in close proximity to one another, are surrounded by irregular-shaped fields (Category 3 field system).

South Cornwall to the west of the River Lynher

A relatively high number of medium-sized hamlets is found on the south and south-east sides of Bodmin Moor. There are sixteen medium-sized hamlets across the six parishes, with eight associated with Category 1 field systems and six with Category 2 field systems. In the parish of St Cleer, Fursnewth (Little and Great), is located in a typical position just below the summit of a hill, in this case formed by the River Fowey to the west and the East Looe River to the east. The settlement is surrounded by a Category 2 field system of approximately 140 acres, probably comprised of four large open fields.

Small-sized hamlets and classes of Field System (Figure 8.5)

Small-sized hamlets are more evenly spread across the local study area, and association with any particular category of open field is therefore much more difficult to discern. This uncertainty means that it is not possible to provide a statistical appraisal of association between small-sized hamlets and category of field system. As will be seen from Table 8.1, the ratio of small-sized hamlets per parish per landscape area varies between 5.45 and 6.95, with the exception of the six south Cornish parishes, where the number is 13.95.

North of the Rivers Ottery and Thrushel

The pattern seen across the Culm Measures is for small-sized hamlets not to be directly associated with either Category 1 or Category 2 field systems, though there are some exceptions. Therefore, in the parish of Ashwater, the settlement

of Statfold (East and West) has a Category 2 field system of approximately 80 acres, to the south-east of the hamlet. On the opposite side of a small stream is the settlement of Muckworthy, a medium-sized hamlet with similar-sized fields.

Central / eastern Cornwall between the Rivers Ottery and Lynher

The association of the small-sized hamlet of Tregue, in the parish of Altarnun, with a Category 1 field system has been discussed above. In the northern moorland parish of Treneglos, the small-sized hamlet of Tregenna lies at the head of a tributary stream of the River Ottery, to the south-west of the churchtown, with Wilsey Down to the west and Kittow Moor to the south. The hamlet is surrounded by a small Category 2 field system of approximately 100 acres. The linked farmsteads of Scarsick (Higher and Nether) lies immediately to the north, associated with a small Category 1 field system, whilst the nearby churchtown of Treneglos has no association with possible open field.

South-west Devon to the south of the River Thrushel

In the south-west Devon parishes, the relative scarcity of Category 1 and 2 field systems has already been noted. As there are a fair number of small-sized hamlets scattered across these twenty parishes (a total of 109) most therefore have no association with Category 1 or 2 field systems. Therefore, in Lifton, small-sized hamlets such as Markstone, Lake and Crosstown are instead associated with semi-regular and irregular-shaped fields.

South Cornwall to the west of the River Lynher

There are proportionately greater numbers of small-sized hamlets on the south side of Bodmin Moor, including in some of the more marginal locations where the larger settlements are generally absent. This is particularly the case in the upland parts of the parishes of St Neot and St Cleer, with thirteen and twelve respectively, for example Lower Langdon, in St Neot, and Siblyback, in St Cleer. The lowland parishes of Liskeard, Menheniot and St Ive also have large numbers of small-sized settlements, with nineteen, seventeen and eleven respectively. Many have no association with former open field, for example Lantewey, in St Neot parish, on the eastern slopes of a tributary of the Warleggan River.

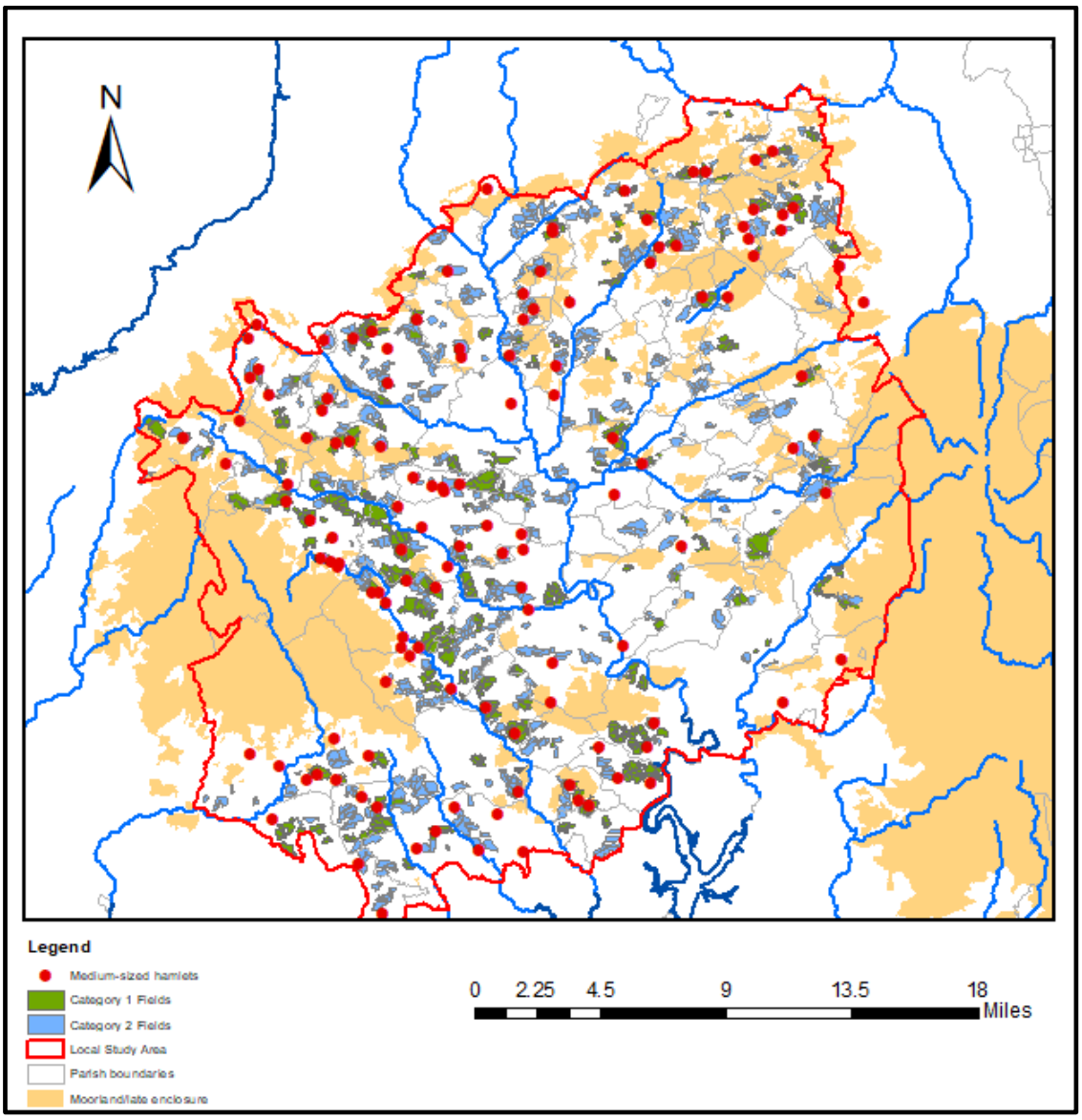


Figure 8.5: Distribution of small-sized hamlets in association with Possible Open Field Category 1 and Category 2 field systems. (ArcMap Extract).

The pattern would therefore seem to be rather mixed, with some small-sized hamlets very definitely associated with possible former open field, in the form of Category 1 and 2 field systems, whilst many others have no such association. There may be a number of alternative explanations for this variation, the most obvious being that many settlements were too small for subdivision of fields to have been practical. In many cases, it would have made much more sense for fields to be held in severalty by the one, two or three constituent farms, although the documentary evidence already referred to does point to some small-sized hamlets as having been organised with open field systems. An alternative explanation could be that communal systems of farming were once operated by many of these settlements but that early enclosure by agreement between

tenants allowed for an even-handed re-distribution of fields, eradicating any evidence for previous arrangements of open field. In these cases, the morphological evidence may simply have been removed.

Where small-sized hamlets are found in areas where there are many Category 1 and 2 field systems, direct association with any one particular set of field is difficult to prove. In some cases, it is apparent that new settlements were established within the fields of existing townlands or in areas of former pasture. For example, there is documentary evidence to show that Stonaford, a long house in North Hill, was once a small hamlet (Herring and Berry 1997, 165). It is located between two very good former open fields, which belonged to the hamlets of Tolcarne and Treveniel, and seems to have had farmland subsequently carved out of the two. The assize roll of 1304 suggests a reorganisation of the fields as early as the early 14th century. By the 18th century it was a small hamlet of two holdings, with evidence of there once having been a third.

Linked Farmsteads and Open Field (Figure 8.6)

A total of 139 linked farmsteads were identified within the local study area. In Chapter 6 it was seen that linked farmsteads were present across most parts of the local study area, though with relatively higher numbers on the southern side of Bodmin Moor (Table 8.1).

North of the Rivers Ottery and Thrushel

The nineteen parishes which together make up the northern part of the local study area include thirty linked farmsteads, a ratio of 1.58 such settlements per parish. Linked Farmsteads on the Culm Measures may be associated with Category 1 or 2 field systems, or with neither. In North Petherwin on the north bank of the River Ottery, the hamlet of Penrose (Higher, Lower and Penrose Green; Figure 6.16), has a Category 1 field system and adjacent Category 2 field system. Following a long narrow ridge defined on the north side by Caudworthy Water, the combined field systems extend to perhaps 400 acres. Across the Tamar in the parish of Clawton, Northdown / Eastdown lies at the centre of a Category 2 field system lying to either side of a narrow stream which feeds into the River Claw, a short distance to the east. A continuous sub-

circular outer boundary suggests that they were originally one settlement, with a possible open field covering a total of about 130 acres.

Central / eastern Cornwall between the Rivers Ottery and Lynher

Settlements in the twenty-five parishes which make up this area include forty-four linked farmsteads, a ratio of 1.76 per parish. The greatest numbers are found in Linkinhorne, with nine, and Stoke Climsland, with seven. In the parish of Linkinhorne, there are two adjacent linked farmsteads, Northcoombe / Southcoombe and Tremollett (West, Middle and East), both set within very extensive Category 1 field systems. The fields around the former lie on the north bank of the River Lynher and are defined by two tributary streams. The field system covers approximately 250 acres, although the settlement is on the southern edge of the fields and they could equally well be associated with Lewarne or Bathpool, a medium- and a small-sized hamlet respectively. Tremollett lies immediately to the north, in a field system estimated to be 220 acres in area, the three constituent parts of the settlement being well spread out within the field system. Tremollett is first recorded in 1350, with the three subdivisions first being recorded in 1813 (Gover 1948, 169).

South-west Devon to the south of the River Thrushel

A total of twenty-nine linked farmsteads were identified in the Devon parishes to the south of the River Thrushel, a ratio of 1.45 settlements per parish (Table 8.4). Along the western fringes of Dartmoor, in parishes such as Whitchurch, Mary Tavy and Peter Tavy, fields tend to be much smaller and may represent assarting of the moorland edge. Higher and Lower Collaton in the parish of Whitchurch lie on the higher reclaimed moorland, whilst just to the west, on lower ground and in the parish of Tavistock, are Higher and Lower Notley, none with any evidence for Category 1 or Category 2 field systems. It seems likely that these settlements were never very large and may represent late colonisation of the moorland fringe.

South Cornwall to the west of the River Lynher

The densest concentrations of linked farmsteads are to be found in the Cornish parishes situated on the south side of Bodmin Moor, within an area where there is also a relative greater extent of Category 2 field systems. A total of thirty-six

linked farmsteads were located across the six parishes, representing a ratio of 6.0 linked farmsteads per parish.

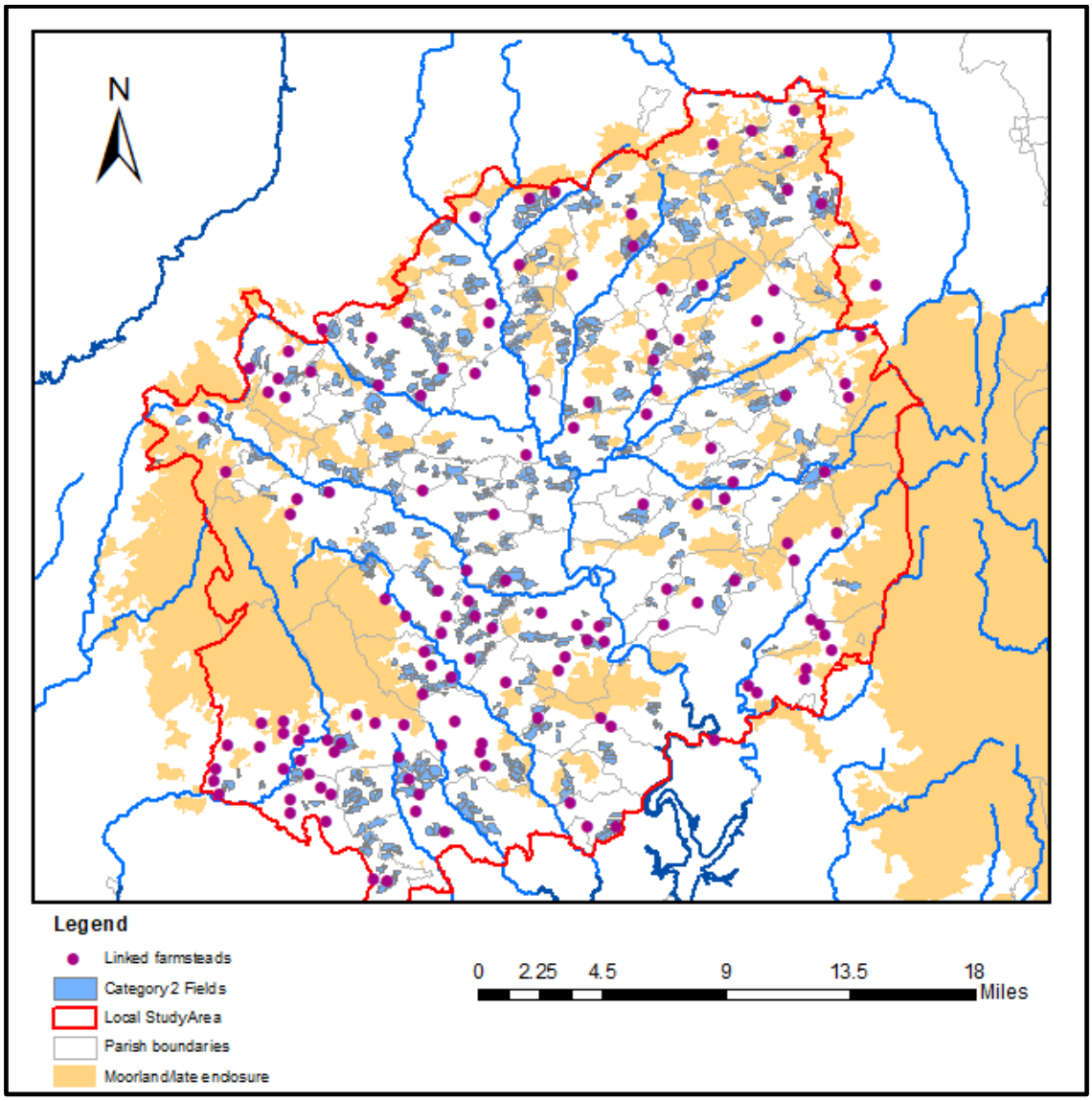


Figure 8.6: The distribution of linked farmsteads and Possible Open Field Category 2. (ArcMap Extract).

St Neot had the largest number, at eleven, followed by St Cleer, with nine, and Liskeard, with seven. Higher and Lower Treworrick sit within a Category 1 field system of 265 acres, lying to the west of St Cleer churchtown and the River Fowey. Treworrick was first recorded in 1339 as Treworer (Gover 1948, 257), with Higher and Lower first recorded on the 1813 OS map. Many linked farmsteads in this area have no such association with possible open field, particularly in the parishes of St Neot and St Cleer. Fragmentation of these settlements may be part of a process which included loss of some settlements

in marginal moorland locations from the late 13th century onwards, as was seen with the Brown Willy hamlet (Herring 2006b). An example of this is Draynes (West, Great and East), on the high ground to the north of the River Fowey in St Neot parish. The possible association of Category 2 field system with early enclosure will be discussed in Chapter 10 particularly given the postulated fragmentation of settlement which linked farmsteads might to an extent reflect. The number of linked farmsteads found in the northern part of the local study area, however, another area where Category 2 field system are relatively significant, is low.

Large Isolated Farmsteads and Evidence for Open Field (Figure 8.7)

Large isolated farmsteads are also found in numbers across most of the local study area, though with obviously fewer totals on Bodmin Moor and Dartmoor, and on some of the other highland areas, such as Broadbury Ridges and Kit Hill / Hingsdon Down. Direct association with former open field is therefore difficult to detect, because of their absolute numbers.

Where they do occur in areas where there are Category 1 and 2 field systems, however, it is noticeable that many cluster around the fringes of the field systems, which could perhaps point to some being later foundations. There are a few good examples associated with some of the better Cornish Category 1 field systems. Maders in the Cornish parish of South Hill, for example, is a large-sized hamlet with a well-defined Category 1 field system and was first recorded in 1175 (Gover 1948, 204; Figure 7.9). On its western limit is the large isolated farmstead of Fursdon (now known as Trefursdon), reached via a track leading off the main road through Maders. The antiquity of the farm is not known, although from its peripheral location, it may be inferred that this is a later settlement.

It is also surmised that many farms which are reached off spur roads may be later settlements, for example, Tredown in Broadwoodwidger, which is reached via a lane off the main road northwards from the churchtown. There is no association with open field and this is presumably an assart. In Devon, Langford Farm in the parish of Tavistock, which lies just to the west of Hurdwick, and is

reached via a lane leading off the north side of the main road from Tavistock to Launceston (now the B3362).

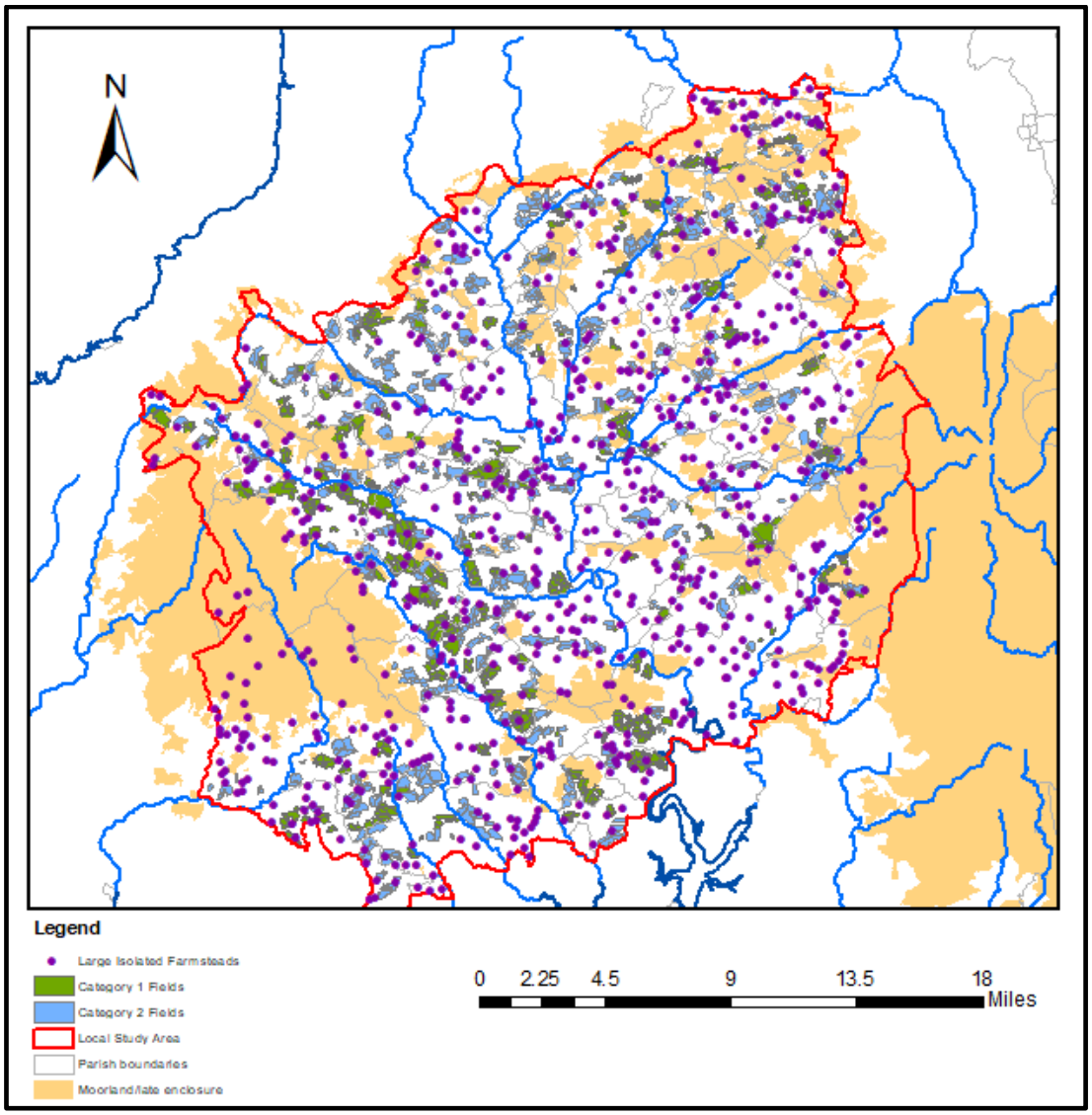


Figure 8.7: Distribution of large isolated farmsteads and Possible Open Field Category 1 and 2 (ArcMap Extract).

Many large isolated farmsteads on the southern side of Bodmin Moor, particularly in the parishes of St Neot and St Cleer also have no association with Category 1 or 2 field systems, including Mennabroom, high up on the moor at 210m AOD, and Trebinnick, in the St Neot River valley at 240m AOD.

Settlement and Category 3 and 4 Field Systems

In Chapter 7 it was noted that Category 3 field systems might derive from a variety of processes, which in some cases might include enclosure of open field

but in many cases could actually be later enclosure of common land. Inevitably, it is therefore more significant in parts of the local study area otherwise lacking in Category 1 or 2 field systems, most prominently the south-west Devon parishes. The large expanse of Category 3 fields across the parishes of Lamerton and Tavistock, to the south-west of Chaddlehanger, has already been described in Chapter 7. These parishes also tend to exhibit low settlement density, with little direct association between the field systems and individual settlements.

Category 4 field systems are largely defined by their location on moorland fringe areas, particularly along the west side of Dartmoor and, as with Category 3 field systems, they may cover quite wide tracts of land. There is therefore often not a direct association with any particular settlement.

Summary of Distributions

The following summary draws on the above and also Table 8.1. For large-sized hamlets, the biggest concentrations were seen in east Cornwall, on the eastern flanks of Bodmin Moor, in the Inny and Lynher valleys and in the lower-lying area between these two rivers and their confluences with the River Tamar. Here, there was a ratio of 2.12 large-sized hamlets per parish. Slightly lower numbers were seen across the northern part of the local study area (1.11 per parish), across both Cornwall and Devon, and also in the Cornish parishes to the south of Bodmin Moor (1.50 per parish), with fewer numbers in south-west Devon (0.70 per parish). Medium-sized hamlets have the highest average numbers in east Cornwall (3.32 per parish) and the lowest in south-west Devon (0.70 per parish). Small-sized hamlets are distributed fairly evenly across most of the local study area, at a ratio of between 5.45 and 6.95 settlements per parish, except in the six parishes on the southern side of Bodmin Moor, where the average number was 13.17. A similar pattern is seen with linked farmsteads, with a ratio of between 1.45 and 1.76 settlements per parish for the majority of the local study area. The exception to this is again those parishes lying on the south side of Bodmin Moor, where the ratio is 6.00.

Table 8.1: Selected settlement types and association with Category 1 and 2 field systems (basic counts).

	Parishes	Settlement numbers	Ave. no. settlements per parish	Associated with Cat. 1 field systems	Associated with Cat. 2 field systems
Large-sized hamlets					
Culm Measures	19	21	1.11	9	11
East Cornwall	25	53	2.12	29	14
SW Devon	20	14	0.70	4	3
South Bodmin Moor	6	9	1.50	3	4
Medium-sized hamlets					
Culm Measures	19	38	2.00	7	17
East Cornwall	25	83	3.32	17	17
SW Devon	20	14	0.70	3	1
South Bodmin Moor	6	16	2.67	8	6
Small-sized hamlets					
Culm Measures	19	132	6.95		
East Cornwall	25	159	6.36		
SW Devon	20	109	5.45		
South Bodmin Moor	6	79	13.17		
Linked farmsteads					
Culm Measures	19	30	1.58		
East Cornwall	25	44	1.76		
SW Devon	20	29	1.45		
South Bodmin Moor	6	39	6.00		

When we turn to Category 1 field systems, there are also denser concentrations in east Cornwall, particularly between the Inny and Lynher; moderate distributions across the northern part of the local study area and to the south of Bodmin Moor; and a scarcity in south-west Devon. Category 2 field systems are again present across most of the local study area, although less so in south-west Devon, but because of the relative absence of Category 1 field systems in the northern part and to the south of Bodmin Moor, they appear to be more important in these areas.

Historic Landscape Character Areas

Introduction

Having reviewed the spatial relationship for settlement types with the various forms of evidence for open field, and defining a series of four provisional historic landscape character areas, the next step was to test the validity of these areas statistically. It is emphasised that historic landscape character areas are not *pays* in the sense defined in Chapter 3. The latter relied heavily on

characteristics of the physical landscape, as well as impressions gained of that landscape in the early post-medieval period. What is presented here is rather a break-down of the local study area into sub-areas which share characteristics in terms of settlement patterns and form and also frequency of possible open field. The historic landscape character areas presented below will then be tested against aspects of the physical environment in Chapter 9.

Analysis

Association between the major settlement classes and Category 1 and 2 field systems are summarised in percentage terms in Table 8.2. Starting with large-sized hamlets, for the northern part of the local study area 43% of such settlements were associated with Category 1 field systems and a higher 52% with Category 2 field systems. Slightly lower numbers in each case can be seen with the parishes on the south side of Bodmin Moor, at 33% and 44% respectively. East Cornwall diverges from this pattern, with 55% of large-sized hamlets associated with Category 1 field systems (or 65% if developed churchtowns are excluded), and a far lower 26% with Category 2 field systems. With a relative absence of Category 1 and 2 field systems, south-west Devon shows a low level of association (29% and 21% respectively), against a backdrop of far lower numbers of large-sized hamlets overall.

Looking at medium-sized hamlets, and concentrating initially on the northern part of the local study area and east Cornwall, there would seem to be a partial reversal of the situation seen with large-sized hamlets. Therefore, in the northern area, 45% of settlements are associated with Category 2 field systems and only 18% with Category 1 field systems, whereas for east Cornwall it is 20% for each. In the case of medium-sized hamlets, parishes on the south side of Bodmin Moor do show a divergence from the northern landscape area, with 50% associated with large-sized hamlets, although raw numbers are actually quite low. In south-west Devon, the numbers are considered too low to be of statistical significance, with only 28% of medium-sized hamlets associated with either type of field system.

Some quite significant differences between the four areas have therefore been identified. Taking them in a slightly different order. East Cornwall exhibits strong nucleation of settlement (2.12 large-sized and 3.32 medium-sized hamlets per parish) and a strong association with Category 1 field systems (55% of large-sized hamlets and 20% of medium-sized hamlets). The northern parishes have moderate numbers of large- and medium-sized hamlets (1.11 and 2.00 per parish respectively), with a slightly higher association with Category 2 field systems (52% in the case of large-sized hamlets and 45% for medium-sized hamlets). The smaller area to the south of Bodmin Moor provides a mixture of the two, with slightly higher numbers of large- and medium-sized hamlets (1.50 and 2.67 average per parish) than was seen with the northern part of the local study area; greater numbers of large-sized hamlets are associated with Category 2 field systems (44%), but the reverse true of medium-sized hamlets (38%). This part of the local study area is also interesting in that it provides the highest rates of both small-sized hamlets and linked farmsteads. South-west Devon shows a completely different picture, with low settlement nucleation (0.7 large-sized and 0.7 medium-sized hamlets per parish), with few associated with Category 1 and 2 field systems (21% and 7% respectively).

These figures confirm that there are statistical differences between the four provisional historic landscape character areas in terms of settlement and possible former open field. It should be borne in mind, however, that the foregoing analysis is based on the structure of ecclesiastical parishes and actual distributions may vary within some parishes, particularly on moorland-edge locations, and between some parishes within the same landscape area.

The four historic landscape character areas may therefore be described as follows:

Table 8.2: Selected settlement types and association with Category 1 and 2 field systems (percentages).

	Parishes	Settlement numbers	Ave. no. settlements per parish	% Associated with Cat. 1 field systems	% Associated with Cat. 2 field systems
Large-sized hamlets					
Culm Measures	19	21	1.11	43	52
East Cornwall	25	53	2.12	55	26
SW Devon	20	14	0.70	29	21
South Bodmin Moor	6	9	1.50	33	44
Medium-sized hamlets					
Culm Measures	19	38	2.00	18	45
East Cornwall	25	83	3.32	20	20
SW Devon	20	14	0.70	21	7
South Bodmin Moor	6	16	2.67	50	38

Historic Landscape Character Area 1 (HLCA 1): North-East Cornwall and West Devon to the North of the Rivers Ottery and Thrushel (Figure 8.8)

The southern boundary of this historic landscape character area approximately follows the courses of two tributary rivers of the Tamar, the Ottery in Cornwall and the Thrushel in Devon, although with a slight divergence where some parish boundaries do not follow the exact course of the Thrushel. Both visual interpretations of settlement and field system patterns, as well as the above statistical analyses, confirm this as an area of moderate numbers of large- and medium-sized hamlets, with slightly more of the latter, associated with both Category 1 and 2 field systems. For the latter, ther is a slight bias towards Category 2 field systems with large-sized hamlets, with a stronger association between medium-sized hamlets and Category 2 field systems.

On the west side of the River Tamar, the historic landscape character area comprises the parishes of North Petherwin, Boyton, North Tamerton and Werrington, with the latter three partially spanning the river into what is modern day Devon (the later civil parish of Northcott at one time being part of Boyton). A larger proportion of this historic landscape character area lies within Devon than in Cornwall, being those parishes lying across Broadbury Ridges and northwards to the River Torridge. The list of Devon parishes is therefore much longer, comprising Clawton, Tetcott, Luffincott, St Giles-on-the-Heath,

Ashwater, Virginstow, Broadwoodwidger, Black Torrington, Highampton, Northlew, Beaworthy, Ashbury and Bratton Clovelly.

The historic landscape character area lies wholly within Natural England's National Character Area (NCA) 149 (The Culm), on its south-western part. In Cornwall, there is a close correspondence between the southern boundaries of both HLCA 1 and NCA 149, whilst on the Devon side of the Tamar, NCA 149 extends a little further to the south, to approximately the line of the River Lyd. The Culm is a landscape largely determined by an underlying geology of folded mudstones and sandstones, giving rise to poorly drained, mainly clayey soils and is cut through by wooded valleys.

It will be noted that this area is relatively high ground with a high proportion of common, rough pasture and late enclosure. On the Devon side of the Tamar this is cut by the upper reaches of the rivers Claw, Carey and Wolf, with the northern limit of the study area defined by the River Torridge. Most settlements of any size, as well as their associated open field systems, are found located in the river valleys rather than across the plateau areas, although there are a number of settlements situated on the high ground, including the churchtowns of Broadwoodwidger and Bratton Clovelly, on Broadbury Ridges.

Historic Landscape Character Area 2 (HLCA 2): Eastern Bodmin Moor and East Cornwall Lowlands (Figure 8.8)

The eastern fringes of Bodmin Moor and the agricultural lowlands between the moor and the west bank of the River Tamar comprise the second historic landscape character area. The northern boundary of the area is formed by the River Ottery, with a band of parishes to the south, following the lines of the River Inny and the River Lynher down from the relatively high grounds of the northern and eastern moorland edge into the lower lying, rolling countryside between the moor and the River Tamar. It is within this historic landscape area that there are the greatest concentrations in the local study area of large- and medium-sized hamlets, and also of Category 1 field systems, along with a moderate number of Category 2 field systems. There is a good association

between large-sized hamlets and Category 1 field systems, with medium-sized hamlets having an equal showing.

Settlement and field systems in the northern part of the historic landscape character area, including in the parishes of Davidstow, Altarnun, St Clether, Laneast and Trewen, tend to be restricted to the slopes of the river valleys themselves, not generally being found on the upland moor areas. On the more fertile lowlands to the south-east, however, settlement nucleation and Category 1 field systems are more ubiquitous across the landscape. This includes the large parishes of Lewannick, North Hill, Linkinhorne and Calstock, with smaller parishes in the south, including St Dominick, St Mellion and Pillaton. The south-western boundary of the historic landscape character area lies approximately along the line of the River Lynher, though some parishes, such as Altarnun, North Hill and Linkinhorne, straddle the river.

There are some notable gaps in the otherwise clear settlement and field system pattern, most notably in the large Tamar edge parish of Stoke Climsland, but also to a lesser extent in the adjoining parish of Callington and in parts of Lawhitton and South Petherwin. In these parishes, settlement is more dispersed and the incidence of Category 1 field systems lower or entirely lacking. It should also be noted that two towns are located within the historic landscape character area, being the ancient borough of Launceston and the less important market town of Callington. Of these, the former is associated with a very extensive Category 1 field system.

The historic landscape character area falls largely within NCA 152 (Cornish Killas), with Bodmin Moor separately defined as NCA 153. NCA 152 includes the majority of lowland Cornwall and comprises an undulating plateau which is underlain by mainly shale, cut by a number of steep-sided valleys. NCA 153 is underlain by a large granite outcrop which gives rise to thin, acidic soils.

Historic Landscape Character Area 3 (HLCA 3): West Dartmoor Fringe and South-West Devon Lowlands (Figure 8.8)

Historic Landscape Character Area 3 is located between the western fringes of Dartmoor and the east bank of the River Tamar. The northern limit of the area is approximately defined by the River Thrushel, forming a wide valley between the uplands of Broadbury Ridges to the north and Dartmoor to the south, and part of the River Wolf, and is also dissected by the rivers Lyd, Lew and Tavy. Within the historic landscape character area settlement is generally fairly dispersed, with low numbers of both large- and medium-sized hamlets, and few of these associated with either Category 1 or 2 field systems. There are some notable exceptions, however, which include Liddaton, in the parish of Brentor, and Cudlipptown, on the western fringes of Dartmoor. The area is also notable for the presence of two medieval boroughs, Tavistock and Lydford, both of which do have signs of former open field. Of these, the evidence for open field around Tavistock is more fragmentary, its partial loss perhaps explained by the subsequent modern expansion of the town. With Lydford, the former borough is now little more than a village, surrounded by well-defined Category 1 field systems.

As with HLCA 2, this area takes in a range of landscape types, including moorland fringe parishes, such a Sourton, Bridestowe and Peter Tavy, small valley side parishes, such as Marystow and Lewtrenchard, and larger lowland parishes, such as Milton Abbot and Lamerton. The historic landscape character area falls mainly within NCA 151 (South Devon), although the eastern part lies within Dartmoor (NCA 150) and the northern part of this historic landscape area falls within the Culm (NCA 149). The latter include parishes along the rivers Lyd and Lew, such as Lydford, Lifton, Stowford, Marystow, Lewtrenchard and Coryton. In terms of geology and soils NCA 151 is similar to the Cornish Killas, whilst the granite outcrop of Dartmoor is comparable to Bodmin Moor.

Historic Landscape Character Area 4 (HLCA 4): South Bodmin Moor and South East Cornwall Lowlands (Figure 8.8)

From the southern fringes of Bodmin Moor southwards to the limits of the local study area, and extending eastwards to the line of the River Lynher, Historic

Landscape Character Area 4 is characterised by generally moderate settlement nucleation, with slightly larger numbers of medium-sized hamlets over large-sized hamlets, and moderate levels of Category 1 and Category 2 field systems. The area is also notable for relatively high numbers of small-sized hamlets and of linked farmsteads when compared with the other three historic landscape areas. One notable pattern thrown up by the data is the association of half of the medium-sized hamlets with Category 1 field systems, with only a third of Large-sized hamlets having such an association.

As with HLCAs 2 and 3, there is a range in terms of topography and of the underlying geology and soils. Therefore, the parishes of St Neot and St Cleer, in the northern part of the historic landscape character area, take in much of the southern parts of Bodmin Moor, before dipping down into the steep, wooded valley of the River Fowey. To the south and east of the Fowey, the open, undulating farmland of the parishes of St Ive, Menheniot and Quethiock, is similar to that of the Cornish landscape to the north and east of the River Lynher, and to the Devon parishes on the east side of the Tamar. The borough of Liskeard, which is located in the landscape character area, has good evidence for Category 1 field systems.

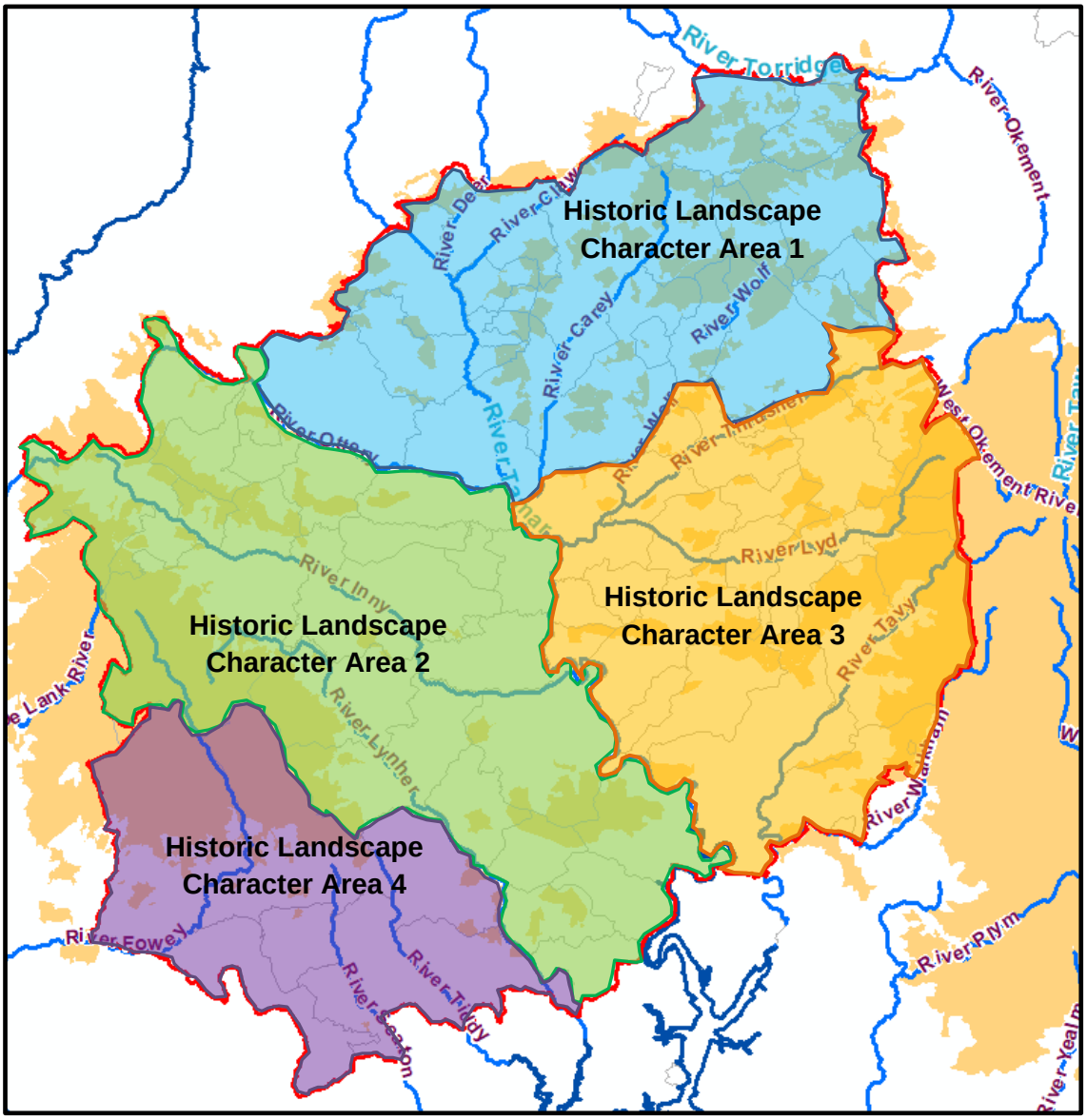


Figure 8.8: Map showing historic landscape character areas

Discussion

The principal objective of this chapter has been to integrate the study of settlement nucleation / dispersal presented in Chapter 6 with the analysis of the distribution of former open fields examined in Chapter 7. This has been with a view to defining landscape character areas based upon the historic landscape, which may be compared with the underlying physical landscape, and as a result four such historic landscape character areas were defined. It is emphasised that historic landscape character areas are based on how the historic landscape has been modified by human intervention, in terms of settlement and field systems,

and this study has shown that there is some correspondence with the underlying physical landscape but that this is not universal. It will also be noted that there is some variation in settlement and field system patterns within each of the Historic Landscape Character Areas, which will be discussed further in Chapters 9 and 10.

In landscape terms, HLCA 1 lies within the Culm Measures (spanning parts of both Cornwall and Devon), although topography varies between the plateau of Broadbury Ridges in the south and the lower lying farmland of the Torridge Valley to the north. Each of the other three historic landscape character areas takes in a similar range of landscape types to one another. All three include moorland fringe and also lower lying agricultural landscapes although settlement and field system patterns vary. The partial match between historic landscape character areas with the physical environment, notably in the northern part of the local study area, but lack of correspondence elsewhere will be explored further in Chapters 9 and 10.

9

Environment, Lordship and Culture

Introduction

The previous chapter defined four landscape character areas, using a combination of settlement nucleation and different forms of evidence for former open field. The next two chapters explore a range of possible reasons to explain the patterns observed.

Various alternative explanations have in the past been put forward to explain why villages and open field developed in some areas and not in others (see Chapter 2). Williamson (2003) argued that it was largely in response to aspects of the natural environment, particularly soils, and human responses to these properties. The balance between arable, pasture and woodland has been regarded as important contributing factors, with the suggestion that villages and common fields developed in areas of limited pasture (Hooke 1985, 105; Lewis *et al* 1997, 198; Williamson 2003); whilst the importance of hydrology has also been advanced (Williamson 2013). In terms of human agency, pressure of population, growth of a market economy and the emergence of the English state have all been proposed as important determining factors (Thirsk 1964, 1966; Lewis *et al* 1997, 179-86, 199-200), whilst others have looked at the concept of the antecedent landscape (Roberts and Wrathmell 2000, 2002; Rippon 2008, 19-20; Williamson 2013). Two further theories which, it will be argued, have some bearing on this study, are the role of lordship and community in the organisation of the landscape (Rippon 2008) and processes of emulation (Taylor 2002, 54), with communities adopting the practices and fashions of their neighbours.

Of these ideas, this first chapter deals with a number of traditional themes which have been used to explain variation in landscape character. First of these is the contribution of the natural environment, including topography, geology and, probably most importantly, soils. For the local study area, the closest fit between settlement patterns and field systems on the one hand and topography and soils on the other is with HLCA 1, across part of the Culm Measures. No such direct fit is apparent with the remaining three landscape character areas, however, which each take in a range of landscape and soil types.

The discussion then moves onto to look at the role of social agency. The latter draws on two important historical studies that have a bearing on Cornwall and Devon which are of direct relevance to the local study area, undertaken by Finberg (1951; 1969a) on Tavistock Abbey and Hatcher (1970a) on the Duchy of Cornwall. The detailed documentary evidence contained in these two studies and, to a lesser extent, Fox and Padel's (2000) study of the Arundells of Lanherne, are directly relevant to the local study area. Comparing the results of these works with the settlement and field system patterns from this study, it will be argued that there is some evidence both for the role of lordship and also for communities adopting the agricultural practices of their neighbours. The final section of this chapter takes on a distinctly cultural slant, testing the distribution of possible former open field against the most tangible indication of cultural identity in the landscape, that of place-names.

Chapter 10 will take a slightly different approach in that it also deals with time depth, looking at processes of enclosure and settlement contraction and dispersal across the local study area in the late medieval and early post-medieval periods. It will be argued that such developments, rather than, for example, the original distribution of open field, has potentially had a greater effect on the formation of the historic landscape of the South West.

Topography, Geology and Soils

This first section considers the extent to which properties of the natural environment may have had a part to play in the settlement and field system patterns described in Chapters 6-8. How the landscape was settled and farmed will, of course, to some extent be determined by the natural environment, whether that be climate, topography, hydrology, geology and soils, and brief precis for these categories in relation to the South West Peninsula were provided in Chapter 3. Given the limited extent of the local study area, however, climate is fairly uniform across the area and high rainfall and the presence of numerous rivers and streams means that hydrology, in terms of the presence or absence of water sources, will not have been a significant issue to the farmers of the region.

Farmers are undoubtedly subject to the limitations imposed by the natural environment. This is particularly the case in terms of arable farming, as some crops do not grow well in damp soils, or where the soils are particularly intractable, although oats and rye will grow in poorer, less well-drained soil. Certain, otherwise poorer soils, however, may be perfectly workable given particular environmental conditions, such as milder temperatures and lower rainfall, with quite minor changes in climatic conditions potentially leading to crop failures.

For these reasons, the size and limits of the local study area were designed to take in a range of similar landscapes lying either side of what became a significant political boundary, the River Tamar. The Tamar is fed by a series of tributaries, including the Inny, Lynher, Carey and Lyd, principally draining off Bodmin Moor and Dartmoor. These are two high granite moors framing the western and eastern limits of the local study area, with lower lying, undulating landscapes between. There are therefore very similar landscapes on the Cornwall and Devon sides of the Tamar, being almost mirror images of one another. The topography and, indeed, the underlying geology, changes as one travels north into the Culm Measures, with the ground rising up to the north of a line approximately following the modern A30 arterial road. As with the

landscapes to the south, the Tamar itself does not mark a division in the landscape, with topography and geology indistinguishable between north-east Cornwall and the adjoining part of west Devon.

The role of soils in agricultural practice

One significant factor in patterns of landuse, particularly with farming practices, concerns the properties of soils and, in particular, their suitability for the growing of the main arable crops. In large part derived from underlying geology, many other processes can act on soil formation, such as average temperatures, rainfall and topography, to affect its workability, fertility and moisture content, and to determine length of growing season for arable crops. This means that there can be quite considerable differences in soil properties over fairly short geographical distances.

In the early Saxon period, areas of light, free-draining soils were disposed to be the main arable districts, as they tended to be the soils most easily worked. Some such soils, however, for example those formed on sands and gravels, could be low in nutrients and therefore poorly yielding in terms of crops. In areas of high rainfall, such as south-west England, soil nutrients might easily be leached out of the topsoil and again result in low yields over time. On the other hand, clay soils may be harder to work agriculturally, retaining higher levels of water in winter and with the potential to dry out and become rock hard in summer. Often referred to as being ‘intractable’ there can also be much variation between different types of clay soils. Pelo-stagnogleys and non-calcareous pelosols, in particular, can be particularly difficult to work, can become impacted if worked wet, and clog up ploughs and harrows (Williamson 2013, 50). It should be borne in mind, however, that soils were often modified by the addition of various materials, to improve fertility, neutralise acidity or to improve workability. As a result, modern day soils in some places may have changed considerably in terms of their properties since the Middle Ages as a result of centuries of human intervention and modification.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.1: Extract from Soils of England and Wales Sheet 5: South West England (Soil Survey of England and Wales 1983).

Key to Table 9.1

Number	Association	Number	Association
421b	Halstow	712d	Hallsworth 1
541h	Neath	712e	Hallsworth 2
541k	Denbigh 2	713b	Sportsmans
541n	Trusham	721d	Wilcoks 2
611b	Moretonhampstead	1013b	Crowdy 2
611c	Manod		
612a	Parc		
651b	Hexworthy		

Soils of the local study area

The Soil Survey of England and Wales have published a series of soil maps at a scale of 1:250,000, mapping the extents of soil associations within each region. Associations are groups of soils which exhibit similar characteristics in terms of mineral content and structure. An extract of the soil association map for south-west England is reproduced as Figure 9.1, with the boundary of the local study area added for ease of reference.

Bodmin Moor and Dartmoor present a complex array of principally acidic soils which are in the main unsuitable for arable cultivation, such as the peaty soils of the Crowdy 1 association and the acidic podzolic soils of the Moorgate association. Much of the lower-lying undulating landscape lying between the moors is dominated by brown loamy soils which are, on the whole, suitable for cultivation. The dominant type across south and south-east Cornwall and south-west Devon to the south of the River Thrushel, are soils of the Denbigh 1 association (541j), which are typical brown earths formed of permeable clay loams. Other brown earths found less commonly across the local study area include Denbigh 2 (541k), Neath (541h) and Trusham (541n) associations. Such soils are generally free draining and are moderately suitable for the growing of crops, though perhaps better suited for pasture, as the high rainfall of the South West does impose a limitation on the growing season for many crops. Other soils present include outcrops of Manod association (611c), also

free draining soils which are moister, and those of the Sportsmans association (713b), which are fine loamy soils that are prone to waterlogging.

The range of soils to the north of the Rivers Ottery and Thrushel are noticeably different, being dominated by soils of the Hallsworth 1 association (712d). They are defined as slowly permeable, seasonally waterlogged soils over shale and shaly Head. These are pelo-stagnogleys, with the clay content of the soil increasing from the surface into the subsoil, and the soil will often be unworkable in the spring and autumn, making it unsuitable for regular cultivation. There are also areas of brown earths, however, with soils of the Neath association (541h), which is a fine loamy brown soil which is permeable and generally well-drained, though can waterlog in patches. In places there are also pockets of Halstow association (421b) soils, which are non-calcareous pelosols, which are more slowly draining.

Settlement distribution and soil type

The distribution of large- and medium-sized hamlets were separately overlain on the soil association map extract and are presented here in Figures 9.2 and 9.3. As has already been noted, the densest concentrations of both settlement types were found between the eastern flanks of Bodmin Moor and the River Tamar, to the south of the River Ottery. Here, the dominant soil type is that of the Denbigh 1 association (541j), suitable for the growing of arable crops. Indeed, this is also the part of the local study area which has the densest concentration of Category 1 field systems, the majority therefore being on Denbigh 1 soils. In the parish of Calstock, some soil variation is seen, with the field systems of Harrowbarrow and Metherell located on Denbigh 1 soils and those of Latchley and Chilworthy on those of the Manod association. By way of contrast, the adjoining parish of Stoke Climsland to the north is predominantly made up of Denbigh 1 soils, but has already been highlighted for its low settlement nucleation and lack of Category 1 field systems. The same ranges of soils are present on the south side of Bodmin Moor, with Denbigh 1 soils across much of the area, but with Manod association soils on the southern slopes of the moor, for example around St Neot churchtown, and in the valleys of the Rivers Tiddy, Seaton and East and West Looe.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.2: Distribution of Large-sized hamlets, villages and developed churchtowns on Soil Associations (Soil Survey of England and Wales 1983).

As was observed in Chapters 6-8, south-west Devon to the south of the River Thrushel has highly dispersed settlement patterns and low incidence of Category 1 and 2 field systems. The range of soils represented, however, is very similar to those seen to the west of the River Tamar. These are again dominated by Denbigh 1 association soils, with outcrops of mainly Manod and Sportsmans association soils. In terms of particular settlements and field systems, West Liddaton, with its compact Category 1 field system, is located on Denbigh 1 soils. Cudlipptown, on the elevated western fringe of Dartmoor is, however, also located on freely draining brown earth soils, this time of the Trusham association (541n).

Large- and medium-sized hamlets across the northern part of the local study area are sited on a different range of soil types. Close to the River Tamar, several large-sized hamlets are situated on soils of the Neath association, including Quoditch and Higher Prestacott in the parish of Ashwater, and East and West Panson in St Giles-on-the-Heath (Figure 9.2). Medium-sized hamlets are at their most dense in an area across the northern part of the area, predominantly on Hallsworth 1 soils, which are poorly draining and given to periodic waterlogging (Figure 9.3). East and West Chilla, in the southern part of the parish of Black Torrington are partly sited on Halstow association soils and are surrounded by Category 1 field systems. These extend up onto land which is classed as Hallsworth 1. A similar situation is seen with Eworthy, in the parish of Germansweek, where the hamlet is located on Neath association soils but the associated field system spreads up onto Hallsworth 1 soils. Category 2 fields are also spread across a range of associations, although Hallsworth 1 soils do predominate. Therefore, in the eastern part of the parish of Northlew, quite extensive Category 2 fields have their core on the Neath association soils but spread more extensively onto Hallsworth 1 soils. In Clawton, field systems to the north-west of the settlement also extend across Hallsworth 1 soils.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.3: Distribution of Medium-sized hamlets on Soil Associations (Soil Survey of England and Wales 1983).

Discussion

It will be seen from the foregoing that both large- and medium-sized hamlets may be sited on a variety of different soils, including both the pelo-stagnogleys of the Culm Measures as well as the more ubiquitous freely draining soils of the Denbigh 1 association to the south. Comparing the distribution of these settlements, which were in part used to define historic landscape character areas, with the soil association maps has provided some interesting results. The southern limit of HLCA 1 was defined as following the approximate line of the River Ottery in Cornwall and the River Thrushel in Devon. A glance at the soil map in Figure 9.1 also indicates a basic division in soil types along the lines of these two rivers, with a dominance of more intractable clays to the north and of brown earths to the south. The Culm Measures are also a little more elevated than are the lowlands to the south, with slightly higher rainfall. Whilst many of the more extensive open field systems were in the river valleys where there were better alluvial soils, for example the Category 2 field system around the large-sized hamlet of Quoditch alongside the River Carey, others were situated on higher ground, for example in Broadwoodwidger and Bratton Clovelly. Therefore, although HLCA 1 appears to correspond with a part of the Culm Measures, settlements may still be found on a variety of soil types. Overall, however, an area dominated by higher terrain and relatively poorly draining soils is associated with an identified pattern of moderate settlement nucleation and greater preponderance of Category 2 field systems.

In looking for explanations for this association, it will be noted that the Culm Measures do not provide the most suitable soils for arable farming, as is evidenced today by the dominance of livestock farming across these parts of Cornwall and Devon. That it was brought into cultivation in the Middle Ages, as is clearly shown in Chapters 7 and 8, would suggest both an economic incentive and the technological means with which to carry this out. One such development often pointed to, for example, is the adoption of the heavy mouldboard plough (for example Orwin and Orwin 1938, 39), which could cope with heavy clay soils. Another is the use of a whole range of soil improvers, such as manure or beach sand, which could also be brought into play,

assuming that there was an economic incentive for such investments. The milder climate of the High Middle Ages would also have been of some help.

In the central areas of the local study area, to the south of the Ottery and Thrushel, settlement and field system patterns do not appear to be wholly determined by underlying soils, except on the elevated masses of Bodmin Moor and Dartmoor. Soils in the lowlands are dominated by freely draining brown earths, particularly those of the Denbigh 1 association, both sides of the River Tamar. There is more nucleated settlement and a greater prevalence of Category 1 fields in east Cornwall, with dispersed settlement and a general absence of Category 1 or 2 fields in south-west Devon. It is of note that soils in south-west Devon, that is HLCA 2 should also be better for arable cultivation than those of HLCA 1, on the Culm Measures to the north, and yet settlement in the latter would appear to have once been denser, with more evidence for former open field.

Some variation from within historic landscape areas is also apparent, the most obvious being the marked differences in settlement and field system patterns seen between the adjacent parishes of Calstock and Stoke Climsland, in east Cornwall. These do not seem to be determined at the local level by the distribution of soil types. Therefore, Calstock has a variety of soil types, including Denbigh 1 brown earths, good nucleation of settlement and Category 1 field systems; Stoke Climsland is dominated by Denbigh 1 soils but has low settlement nucleation and an absence of Category 1 field systems. Within Historic Landscape Character Area 3, on the other hand, there are a small number of large- and medium-sized hamlets, some associated with well-defined Category 1 field systems. This is in contrast to the overall character of the surrounding agricultural landscape. It will be presumed, therefore, that some very particular circumstances have led to such different arrangements of settlement and field systems which were not wholly determined by environmental factors.

One further point to make, however, is that some variation in settlement patterns and field systems can be determined by more local physical factors,

such as localised distributions of soil or patterns of hydrology, such as the presence of streams and springs (Williamson 2013). The Culm Measures, for example, varies from the higher plateau of Broadbury Ridges to the lower lying terrain leading northwards to the Torridge Valley, and is incised by several rivers such as the Claw and Torridge. In the south-western part of the local study area, corresponding with HLCA 4, for example woodland, would have been more extensive in the medieval period, particularly on the steeper slopes of the main river valleys, including the Tamar and Fowey. The southern edge of Bodmin Moor where it is skirted by the River Fowey, for example, was particularly well-wooded, as parts of it remain to this day, and the presence of such landscape may have limited the development of larger settlements. Such variation does not, however, seem to have determined overall settlement patterns within each historic landscape character area.

Lordship and the Influence of Tavistock Abbey

Significant parts of the local study area were at various times controlled by major landowners, including Tavistock Abbey, the Earldom / Duchy of Cornwall and Exeter Cathedral, as well as notable families such as the Dinhams, the Arundells and, latterly, for the former estates of Tavistock Abbey, the Dukes of Bedford. Documentary records associated with at least three of these landholders have been the subject of important social and economic studies, and it has therefore been instructive to compare the results of these studies with settlement and field system patterns observed within the local study area. The works in question are Finberg's (1951; 1969a) detailed economic investigation of Tavistock Abbey; Hatcher's (1970a) study of the Duchy of Cornwall; and Fox and Padel's (2000) work on the Arundell family of Lanherne.

A number of issues arise in using these secondary sources, however, not least of which is that of their varying timeframes. Whilst Tavistock Abbey deals with the institution from its foundation in the later 10th century, the Duchy of Cornwall was only created in the 14th century, albeit having its origins in the Earldom of the late 11th century onwards, and Hatcher's study covers the 14th-15th centuries. In addition, some land was held by the bishops of Exeter, as a

Peculiar (estate held directly), based on the estate of Lawhitton (Figure 9.8). The main holdings of the Arundells were in mid- and west Cornwall, though they later acquired land from the Dinhams and the earls of Oxford in the 15th and 16th centuries which included some estates in east Cornwall (Fox and Padel 2000; Figure 9.7).

This section starts by looking at the economic evidence for the estates of Tavistock Abbey, whose core lands covered the south-western Devon parishes of the local study area, principally in the parishes of Tavistock itself, Whitchurch, Lamerton and Milton Abbot, as well as Stoke Climsland and Werrington in Cornwall. In terms of the local study area, these are precisely the areas with the lowest settlement nucleation and least evidence for open field farming.

Foundation and Endowments

The records for Tavistock Abbey go back to its foundation charter in AD 981, giving us some sense of developments both prior to the Conquest and during the course of the High Middle Ages. This provides the opportunity to investigate any correspondence that there might be between the holdings of the abbey, relative settlement nucleation and presence or absence of former open fields. This is not a straightforward procedure, however, as some of the original land endowments were subsequently lost or otherwise disposed of, and other new holdings acquired over time (Finberg 1969a, 5-7).

The original endowment of twenty properties was created out of the royal hundred of Lifton. Of those holdings which lie within the local study area, there was Tavistock itself, the large manors of Milton Abbot, Linkinhorne and Climsland, covering the parish of Stoke Climsland. There were also the smaller manors of Downeckney, in Warbstow, and Panson, in St Giles-on-the-Heath. By 1066 Panson and Downeckney had been disposed of and Climsland was in the hands of Harold Godwinson. On the other hand, a number of properties had also been acquired, including (in the local study area) Liddaton in Brentor, Penharget in St Ive, Trewanta in Lewannick, and Tolcarne and Illand in North Hill. There were also small virgates (yardlands) in Boyton, and two in Trebeigh, in the parish of St Ive. The royal estate of Werrington, extending to 19 square

miles, was gifted to the abbey sometime between 1066 and 1068, by Gytha, the mother of Harold Godwinson. The transaction was in time deemed to be illegal and the estate was soon handed over to Baldwin, Sheriff of Devon, but subsequently again acquired by the abbey in 1096, becoming part of Devon in the process. In the years following the Conquest a number of estates were lost. Baldwin took Way, in Bridestowe, and Robert, Count of Mortain took Boyton, Trebeigh, Illand and Trewanta (Finberg 1969a, 10-12). Conversely, Brentor was gifted by Robert Giffard, Lord of Lamerton and Whitchurch, to the abbey at the beginning of the 12th century, linking Liddaton with the group of manors in Milton Abbot (Finberg 1969a, 16).

Correspondence with Field Systems

This complex series of acquisitions and disposals may at first glance seem too complicated to disentangle, and therefore potentially of little use when looking for any correspondence with settlement and field system arrangements. Some broad patterns may be discerned, however, with some of the larger holdings. The core parishes of Tavistock and Milton Abbot, for example, are notable for low settlement nucleation and for Category 1 field systems to be generally absent, albeit with a small number of notable exceptions which will be discussed below. In addition, two Cornish parishes, which in this study are marked by low settlement nucleation and by a relative lack of either Category 1 or Category 2 field systems – Stoke Climsland and Werrington – were both at one time estates of Tavistock Abbey. The former belonged to the abbey in the later 10th and early 11th centuries, but by 1066 was in the hands of Harold Godwinson, subsequently becoming a core estate of the Duchy of Cornwall. The estate of Werrington, on the other hand, which included the adjoining parishes of North Petherwin and St Giles-on-the-Heath, was originally a royal estate, but from the late 11th century was firmly under the control of Tavistock Abbey (Finberg 1969a, 10). It was therefore interesting to consider whether low settlement nucleation and absence of open field was a particular feature of Tavistock Abbey estates, and to consider the nature of fields and the extent of open land, for example commons or demesne pasture.

One factor which was considered was the significance of livestock farming to the abbey, which in the 11th- and early 12th-century records seem to have been dominated by sheep. Finberg (1969a, 48-9) stated that the abbey directly controlled its demesne lands. Records indicate that at the time of Domesday the abbey had large flocks of sheep in the lands around the abbey itself, centred on the manor of Hurdwick to the north-west of the town, and also in the manor of Werrington (Finberg 1969a, 145). Finberg (1969a, 47) thought that the original abbey demesne included most of the land lying between the Lumburn stream and the Wallabrook, a not inconsiderable area. Although the southern part was suitable for arable, the northern 200 acres was more elevated, less fertile land, which merged into the wastes of Heathfield. In the centre of this was the abbey sheepfarm, or *heordwic* (Hurdwick). Werrington is also noticeable for a lack of evidence for former open field and for low settlement nucleation, and it is interesting that here, too, the abbey pastured sheep on its demesne land, including the wastes of Michelcroft (Werrington Down). It is not possible to assess the contribution of sheep flocks as a proportion of the economic activities of these two estates, but it was presumably higher than on other Tavistock holdings. Sheep farming would also seem in time to have been replaced in importance by cattle and dairying, which will be discussed more fully in Chapter 10. No such association with sheep rearing is apparent with the manor of Climsland in Cornwall, however, coincident with the ecclesiastical parish of Stoke Climsland. Here also, the analysis of settlement patterns and field systems would point to both low settlement nucleation and absence of Category 1 fields, as was the case with Werrington, although Category 2 fields were present. It may not be possible to make direct comparisons between the two manors, however, as Stoke Climsland had already passed out of the control of the abbey by the time of the Conquest (Finberg 1969a, 10), and by 1337 it was one of the assessionable manors of the Duchy of Cornwall (Hatcher 1970a, 17).

Documentary Evidence for Open Field and Implications for HLCs

As will become clear, conclusions drawn from the study of field systems in the south-west Devon parishes of the local study area could have important implications for the reliability or otherwise of traditional HLCs. If on the basis of

the results of Chapter 7 it is postulated that evidence for former open field was largely absent from land controlled directly by Tavistock Abbey, it will then be necessary to address the documentary evidence presented by Finberg (1951; 1969a) which seems to suggest otherwise. The morphological evidence drawn from historic maps does not support the hypothesis that open field was widespread in this area. For the parish of Tavistock, however, Finberg refers to documents which he regards as evidence for there once having been open fields in the parish, a summary of which is presented in Table 9.1. Reference is made to deeds dated to between 1310 and 1318, for example, which refer to parcels of land lying 'dispersedly' near Pixon, in Tavistock which suggested to him the presence of open field (Finberg 1969a, 49). Also in the early 14th century, three dispersed parcels of arable were acquired at Bowrish, in Tavistock, and in 1309 another parcel of land is referred to as being adjoined on one side by 'the land of all the men of Niweton' (Newton in Tavistock), again interpreted as being open field (Finberg 1969a, 49-50).

Table 9.1: References to Furlongs and Selions in Tavistock parish, cited by Finberg (1969a, 48-50), compared with field system evidence.

Township	**Reference**	**Description**	**Open Field Evidence**
Ogbear	Two furlongs of land conveyed c. 1302, Richard de Ocbear to his son, Walter. Land purchased by Robert Davy on behalf of abbey c.1306	Ten acres in the furlong between Tor and Ogbear and extending west of township; Eleven acres in Yerkysburghe furlong; Two and a half acres in Broken Cross Furlong; Parcels of land 'both enclosed and unenclosed'.	None definitevely identified in area of Ogbear.
Pixon	Deeds of 1310 and 1318.	Acres and half acres lying dispersedly near Pixon.	Now urban area.
Downhouse	Conveyance by William de Bourhywis to abbot and convent in 1299.	Selion on 'La Doune' (former downland around Bowrish).	Category 2 fields on edge of Tavistock; otherwise none identified.
Bowrish	Conveyance by William de Bourhywis to David Matheu c.1300.	Three dispersed parcels of arable with a meadow in Bowrish.	None identified around Bowrish.
Newton	Unspecified document of 1309.	Piece of land described as bounded on one side by 'the land of all the men of Niweton'.	None identified around Newton.
Artiscombe	Part of a land transaction by abbey in 1311.	New ditch made to divide abbey furlongs from those of the freeholder of Woodovis.	None identified between Artiscombe and Woodovis

When looking at the field morphology evidence, whilst there are some curving field boundaries represented on the late 19th-century OS maps, fields around Bowrish and Newton, by then reduced to cottages on the one hand and a farm on the other, are not distinctive enough to be regarded as either strip-based fields or cropping units, based on the criteria adopted in this thesis. There are groups of semi-regular fields with roughly parallel curving boundaries, for example to the north and west of Newton, which in this study have been defined as Category 3 field systems. They have some of the characteristics of enclosed former open field, for example some fields with slightly curving parallel sides, but their position across gently sloping countryside is more suggestive of enclosed pasture or commons and not of former open field.

A more intriguing case relates to the settlement of Ogbear. A document of 1306 is referenced in which land at 'Ogbear-ham' is purchased for the abbey, which is 'both enclosed and unenclosed' (Finberg 1969a, 51). A charter of 1302 refers to a grant of land by Richard de Ocbear to his son, comprising various parcels of land, three of which are described as lying in specific furlongs, for example between Ogbear and the Lumburn (Finberg 1969a, 46). On the 19th-century OS maps, fields lying directly to the south of Ogbear are broadly rectangular in shape, with boundaries on the long axes only very slightly curving (Figure 9.4). From here, the ground slopes down steeply to the east to the Lumburn stream, with the slopes well-wooded. Based on the criteria used in Chapter 7, the curves in the long boundaries were not sufficiently pronounced for them to be defined as cropping units although, given the documentary evidence, a case could be made for fields such as these to have once been open field. Ogbear lies on the northern border of Tavistock with the parish of Lamerton where, between the nearby settlement of Ottery and the Lumburn stream, there is an extensive area of cropping units, on ground which is again fairly steeply sloping. On the opposite side of the Lumburn and extending north-eastwards towards Chaddlehanger, there are areas of Category 2 fields with, around Chaddlehanger itself, a small Category 1 field system. One problem with the Lamerton field system, however, would seem to be the lack of an outer, defining, stock-proof boundary, which is usually seen with Category 1 and 2

field systems, and some, at least, may be enclosed common or pasture land rather than former open field.

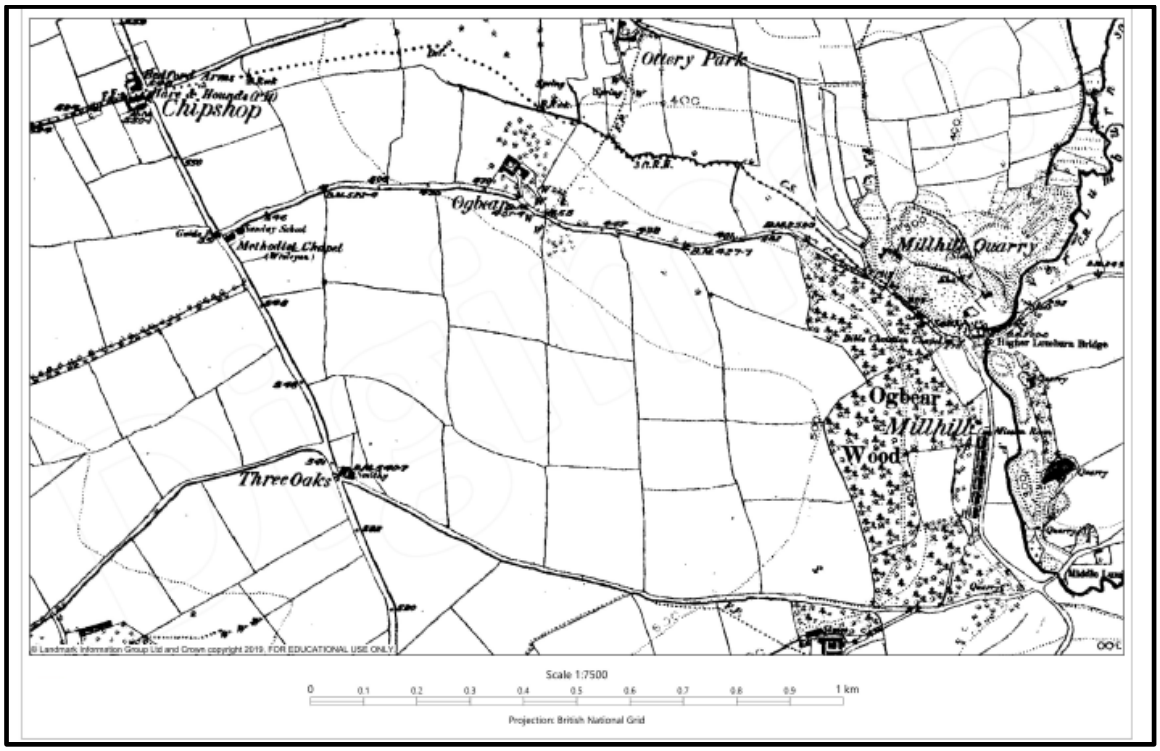


Figure 9.4: Fields to the south of Ogbear. (Digimap: Six Inch to One Mile OS map of 1889).

The interpretation of the documentary evidence presented by Finberg for former open field therefore remains unclear. Interestingly, Finberg (1952, 275-82) also states that 'the thirteenth-century selions and furlongs have left no trace upon the ground', but also that 'the absence of the characteristic strip configuration is no proof that strips did not exist there in the past'. It could be that open field had been present across these south-west Devon parishes and that subsequent processes acting upon the landscape, such as a major reorganisation of the landscape by Tavistock Abbey or even by its post-Reformation successors, the Dukes of Bedford, has subsequently removed most of the physical evidence. Finberg (1969a, 50) notes, however, that after the first quarter of the 14th century there was no more mention in documents of selions and furlongs, that is, the language of open fields, which he suggested was evidence for earlier enclosure. The balance of probabilities would therefore seem to be that open field had once been present in this part of Devon but that it had either never been particularly ubiquitous or that it had been enclosed earlier and more

comprehensively than in other parts of the local study area. This all has important implications for interpreting 19th-century maps too literally. Map evidence may be taken back in time only so far, and whilst this study has provided good evidence for former open field across much of the local study area, fossilised in field boundary patterns as a result of late medieval and early post-medieval enclosures, evidence for earlier enclosure, in this case late 12th-/early 14th-century, has largely been lost.

Tavistock Abbey's Management of its Estates

The above discussions imply a direct control of demesne land being exercised by Tavistock Abbey. Studies of other ecclesiastical landowners have shown that some were more interventionist than others. Rippon (2006) looked at the correspondence of open fields with the estates of both Glastonbury Abbey and also those of the Bishops of Wells, across the North Somerset Levels, and concluded that the two institutions managed their lands in very different ways. It was demonstrated that whereas the lands of Glastonbury Abbey tended to be characterised by villages and open fields, those of the bishops of Wells exhibited a more variable pattern, suggesting a less hands-on approach to the management of their estates. The most extensive and well-preserved open field system surviving in the South West, at Braunton to the north-west of Barnstaple, was one such holding of Glastonbury Abbey. In that part of north Devon, there was also a concentration of smaller strip-based fields (Finberg 1952; Fox 1972; Riley and Wilson North 2001; Rippon 2004a; Rippon 2008, 87). Many are found in association with smaller hamlets, such as Winsham and Hasinger, however, which were not Glastonbury Abbey holdings.

If some, albeit limited, open field had once been present in south-west Devon, but subsequently enclosed at an early date, then one explanation could be the increasing importance of livestock, and in particular cattle and dairy herds, to the economy of the abbey during the later Middle Ages. Livestock was already significant to the abbey by the time of Domesday, when the three most important sheep dairies of the abbey were Leigh, Werrington and Hurdwick (Finberg 1969a, 135). In 1086, Tavistock Abbey had possessed 786 sheep, with more than half in the vicinity of Tavistock and 150 at Werrington (Finberg

1969a, 415). In 1398 there were 415 at Hurdwick, 167 at Werrington, 249 at Leigh and 243 at Morwell. Cattle were to take on an increasing importance during the course of the Middle Ages. The Hurdwick accounts also show marked reductions in acreage under crops between 1433 and 1446, and again from 1473 to 1491, accompanied by increases in the sale of livestock, wood and dairy produce (Finberg 1969a, 253). The extent of ploughland also dwindled over this period. What is not clear is the size of the actual estates that these livestock numbers relate to, or whether they were more significant than in the estates of other landowners across the same areas. This growing importance of livestock farming to the abbey during the course of the later Middle Ages will be examined in more detail in Chapter 10.

Sub-tenancies and Knights' Fees

The phenomenon of the small number of large- or medium-sized hamlets, or linked farmsteads, in the south-west Devon parts of the local study area (HLCA 3) that are associated with Category 1 and Category 2 field systems, now requires addressing.

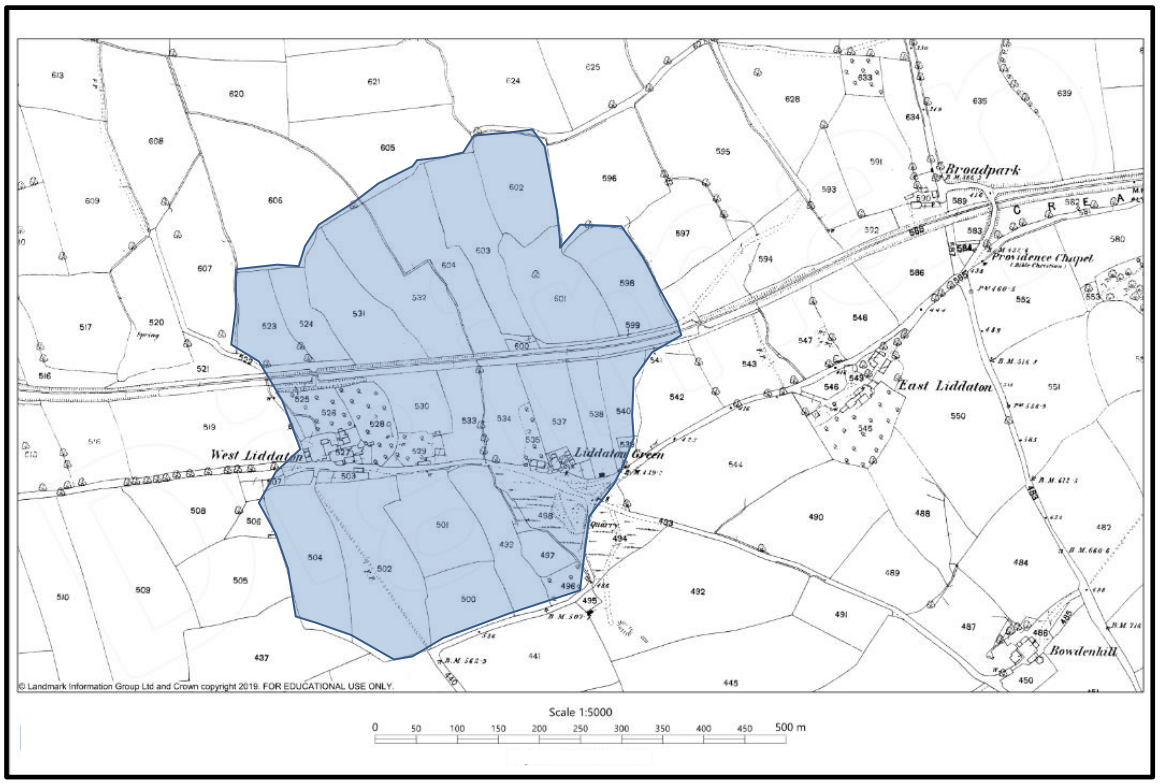


Figure 9.5: Category 1 Fields around West Liddaton. (Digimap: Twenty-five Inch to One Mile OS map of 1884).

The foregoing discussion has suggested that during the Middle Ages Tavistock Abbey exercised some control over its estates, which was not conducive to the formation or perhaps continuance of open fields in those areas. There was also limited nucleation of settlement which, as has been seen, would more typically be seen with communal methods of farming.

Table 9.2: Knights fees held of Tavistock Abbey (1135) compared to identified field system (based on Finberg 1969a, 13-14).

Holders (Knights' Fees)	**Tenancies**	**Associated Field Category**	**Tenancies Outside Local Study Area**
Richard De Alneto (4)	Tolcarne	2	Sheviock, Rame, Trewornan, Antony
	Penharget	2	
	Taviton	None	
Roger Cornu (2)	East Pulworthy	1	Thornbury
	Nutley	None	
	Romansleigh	None	
	West Liddaton	1	
Reginald De Liddintone (2)	East Liddaton	0	Northcote, Marshford, Langabear
	Quither	1	
	Foghanger (Poflet)	1	
	Youngcott	2	
Geoffrey De Lege (1½)	Leigh (Milton Abbot)	None	Odam
William Gurdet (½)	Chillaton	None	
Hugh De Wicha (1)	Week (Milton Abbot)	None	
	Ogbear	None	
	Hasworthy	None	
Ralph De Oskereulle (2)			Askerwell, Eggerdon, Poorton, Broomford
William De Tribus Minetis (2)			Coffinswell
Robert Daucus (½)			Houndtor
William De Creubere (½)	Crebor		Fishleigh, Hannaborough

It has also been shown that some settlements, such as West Liddaton in Brentor, are surrounded by quite well-defined Category 1 field systems (Figure 9.5). It was recognised early on in this study that West Liddaton was one of a number of holdings which were granted by the abbey to sub-tenants as part of knight's fees in the years following the Conquest, in order to fulfil the military obligations of the abbey to the Crown. Knights' fees are estates which impose a

military obligation of knight's service on the holder. A summary of those relating to Tavistock Abbey in 1135 are presented in Table 9.2.

If it is postulated that the demesne lands and other holdings of Tavistock Abbey were characterised by dispersed settlement patterns and absence of open field, then it may have been the case that tenants holding knights fees dealt with the management of their holdings in very different ways, according to their own specific wants and requirements. They could perhaps be free to take either an interventionist or a *laissez faire* attitude independent of the constraints of the abbey. Looking at the holdings as they were arranged in 1135, for example, Roger de Liddintone had two such knights fees, which included East Liddaton in Brentor, Quither, Foghanger (with Poflet), and Youngcott in Milton Abbot (some holdings counted as a proportion of a knight's fee). Of these, two have been identified as having had strip-based fields, whilst Youncott has cropping units. Roger Cornu held East Pulworthy in the neighbouring parish of Hatherleigh, which has a system of strip-based fields, West Liddaton, which also had strip-based fields, though there were also some holdings with no evidence for associated open field, for example Nutley in Tavistock. A slightly different pattern is seen with the holdings of Richard De Alneto, with Tolcarne in North Hill and Penharget in St Ive both being associated with Category 2 field systems, dominated by cropping units. Once the centre of a manor belonging to Tavistock Abbey, Finberg (1969a, 5-13) referred to documentary sources which suggested that open field was associated with the manor. The higher incidence of strip-based fields, in the holdings of Roger de Liddinton and of Roger Cornu, and of cropping units in those of Richard De Alneto, may be significant. With the control of estates held as knights' fees thereby effectively lost to the abbey, the particular farming regimes exercised in these holdings may therefore have been more variable. It may have been the case that certain lords organised and controlled their properties to suit their own particular needs, bringing about a reorganisation of settlement and farming regimes within their holdings. Alternatively, these may simply have been later survivals of open field, with Tavistock Abbey enclosing the open fields of those estates which it directly controlled.

There is some evidence for the presence of former open field in Lamerton, associated with Chaddlehanger (see discussion above) and also with North Brentor. Brentor was given by the Lord of Lamerton and Whitchurch to the abbey at some point in the 12th century (Finberg 1969a, 16). When examining the field system pattern on the slopes around the tor and between the settlements of North and South Brentor, a large block of cropping units is in evidence. This is fairly steep, rocky terrain and therefore not prime agricultural land, pointing to a possible origin as a later assart.

The Earldom/ Duchy of Cornwall, the Arundell Estates and Conventionary Tenure

Royal holdings and the Duchy of Cornwall

East Cornwall from the eastern fringes of Bodmin Moor to the River Tamar exhibits very strongly a pattern of nucleated settlement and generally good evidence for former open field, in the form of Category 1 field systems, albeit with some notable gaps. The Earldom / Duchy of Cornwall had a number of large holdings in this area, principally the manors of Rillaton, Climsland, Calstock and Liskeard. Many other manors in the surrounding parishes were in the hands of other lords, however, both ecclesiastical and lay. The Bishops of Exeter held a so-called bishops' peculiar based on Lawhitton (Figure 9.8), and the Arundells had acquired a small number of manors from the Earls of Oxford (Figure 9.7). In addition, Lifton was the centre of a royal estate, to which the crown's Cornish manors were appended, and Lydford was a royal borough created by Alfred, to which the extensive Dartmoor Forest was attached (Hatcher 1970a). The Duchy was not created until 1337, although was the successor of the Earldom of Cornwall, originally instituted in the late 11th century.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.6: Reconstruction of Climsland manor in the later Middle Ages. (From Hatcher 1970a, Map 2, 20, based on an earlier map by R L Clowes, 1930)

At the time of the Duchy's creation there were seventeen 'assessionable' manors. Of these, a number were located within the local study area, they being Calstock, Climsland and Rillaton, as well as the borough of Liskeard (and its rural parish). Both Calstock and Climsland were coterminous with the respective parishes and were large manors. The Duchy operated a system of conventionary tenure, in which holdings were put up for auction in a co-ordinated way at regular intervals, usually every seven years (Hatcher 1970a). In the 14th century, Calstock had 80 conventionary and villain tenants (Hatcher 1970a, 18), and Climsland was the second largest Duchy manor, with 100 conventionary and villein tenants (Figure 9.6). There was also a large deer park in the manor, Carrybullock. Rillaton covered a large part of the parish of

Linkinhorne, and Liskeard was centred on the borough of the same name. Hatcher (1970a, 21) states that holdings of south-east manors were typically of 20-30 acres, but also that there were significant numbers of smaller holdings in Calstock, though some larger holdings in Liskeard. The smaller size of holdings in the manor of Calstock may help to explain the much more fragmented pattern of tenancies and greater prevalence of strip-based fields evident in the field systems around Metherell and Harrowbarrow (Figure 7.9).

Comparison of Duchy holdings with patterns of settlement nucleation and of putative open field provides mixed results. Therefore, of the two large Duchy manors in the local study area which cover entire parishes, Calstock has particularly good evidence for former open fields, in the form and frequency of strip-based fields (Category 1 field systems), at Metherell, Harrowbarrow, Chilsworthy and Latchley. When one turns to the adjoining large parish of Stoke Climsland, however, settlement is more widely dispersed and Category 1 field systems largely absent, although there was a series of Category 2 field systems. As has already been noted, Stoke Climsland therefore exhibits very different field system patterns to those seen in neighbouring parishes.

Rillaton manor was formed from quite a large part of the parish of Linkinhorne, where evidence for open field is fairly ubiquitous across the parish, both on Duchy lands and on those of other landowners. Here, some large Duchy holdings were in the hands of free tenants, with two holdings alone covering half the area of the manor (Hatcher 1970a,19). There is also good evidence for putative open field, particularly Category 1, around Liskeard borough and across its rural parish, with also a mixture of Category 1 and Category 2 field systems, therefore both strip-based fields and cropping units. Liskeard had eighty conventionary and villein tenants, but there was also manorial deer park which was periodically available for pasture. It was also the most well-wooded of Duchy manors (Hatcher 1970a, 19-20). Whilst there is therefore some good evidence for putative open field in some Duchy manors this does not hold true for all of their holdings. Interestingly, Hatcher states that demesne farming was not practised in any of the assessionable manors after 1337 (Hatcher 1970a,

37), which might suggest a light touch to their control of manors, settlements and the way in which they were managed.

Other major landholders

Although holding most of their estates in west and mid-Cornwall, a small number of manors were acquired by the Arundells in east Cornwall, secured through purchase and marriage during the course of the 15th and 16th centuries. The Manor of Downinney was centred on the Cornish parish of Warbstow, with many of its holdings in the adjacent parish of Treneglos, the former being a sub-parish of the latter (Orme 2007, 30). This had been one of three manors held by the Dinham estate, itself acquired from the Cardinam family sometime after 1268; they having been the most prominent feudal family in Cornwall in the 11th and 12th centuries (Fox and Padel 2000, xxvii). Acquired by marriage in 1473, this included a number of holdings which, from the evidence presented in Chapter 7, exhibit good evidence for open field. These include Treneglos itself, Trewonnard, Nether and Higher Scarsick and Tregenna (all with Category 1 field systems dominated by strip-based fields) (Fox and Padel 2000, 174). On the other hand, some lands originally attached to the Cardinham estate displayed a distinct lack of evidence for former open field, including Cartuther, Tencreek and Trethew in Menheniot, and Trebartha in North Hill.

Although no overall pattern in terms of presence or absence of open field on Arundell holdings has been identified, it should be borne in mind that in the case of the local study area we are dealing with blocks of manors acquired by the family towards the end of the medieval period. Any differences will most likely reflect the varying histories of the original estates to which they belonged. If a pattern is to be looked for, however, it may be suggested that an association with putative open field may be seen with the Downinney lands of the Earl of Oxford, though not with those derived from the original Cardinham estates.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.7: Arundell family manors (From Fox and Padel, 2000, 2)

Various other manors in east Cornwall were held by a variety of landlords, although there are currently no useful summaries which could be used in the same way as for Tavistock Abbey and for the Duchy of Cornwall. For example, the bishops of Exeter held Lawhitton in the 12th and 13th centuries, a territory which included the parish of that name plus Lezant and South Petherwin (Figure 9.8). When testing patterns of settlement nucleation and distribution of putative open field across the three parishes, some variation is again seen. Of the three parishes, there is good evidence for strip-based fields in Lezant, some across the southern part of South Petherwin, but a distinct lack of evidence in Lawhitton.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.8: Lands of the bishop of Exeter in Cornwall, rural deaneries, and peculiars. (From Orme 2007, Figure 18, 28)

Processes of Emulation

Whilst HLCA 2 is characterised by patterns of high settlement nucleation and good evidence for possible open field, there were some manors / holdings within this area which do not follow this pattern. It has also been shown from the foregoing that there is not a strong correlation between particular landlords and, for example, presence or absence of former open field within this historic landscape area. This is illustrated most clearly in the adjoining parishes of Calstock and Climsland, the former with good evidence for former open field

and the latter with a near total absence. It would also seem to be the case that the Duchy took less of an interventionist approach to the physical management of its estates (Hatcher 1970a, 171), than did Tavistock Abbey, although at the organisational level the institution of conventionary tenure was a means by which the Duchy could maximise income (see next section).

It remains the case, however, that open field was generally more prevalent in this part of east Cornwall than in the corresponding part of Devon, on the east side of the Tamar. With a number of different landholders in this part of east Cornwall, it might perhaps be suggested that communal methods of farming, exhibited by open fields, may have been spread through a process of emulation, regardless of the particular landlord, with communities adopting the methods and practices of their neighbours. Alternatively, it could be that the influence of one particularly significant landlord – the Duchy of Cornwall – was of a sufficient weight to skew the market for land and as a result how estates and agricultural land were managed, to bring about a fairly uniform pattern of open fields in East Cornwall. Without detailed information on non-Duchy landholdings in this area, however, it is difficult to draw meaningful conclusions on this point.

Conventionary Tenure

One explanation which could be put forward for the development and possible late survival of open field in east Cornwall was the widespread use of a system of landholding known as conventionary tenure. It has already been advanced that the Duchy of Cornwall at the turn of the 14th century undertook no direct exploitation of its demesne land, that there was no common pasture and settlement was scattered (Hatcher 1970a, 52). Under conventionary tenure, holdings were all effectively put up for auction at regular intervals at an ‘assession’, decided by a manor’s court of assession a few months before the expiry of the existing leases, and were recorded in ‘rolls’. Tenancies could be free or unfree, and in many ways resembled typical leasehold tenure. Theoretically, at least, holdings went to those potential tenants willing to pay the highest rents and higher assession fines; a lump sum, though in practice often paid as additional rent for the first six years of the term. It would seem, however,

that whilst rents were commonly kept at the same level, the level of assession fines would often be adjusted up or down to account for level of demand (Hatcher 1970a, 53-4).

The custom seems to have been initiated by the Earldom of Cornwall, and was first recorded in 1288, although it would seem to have been first properly regularised under John of Eltham in 1333 and only became important under the Duchy (Hatcher 1970a, 71). Assessions were usually held every seven years, traditionally at Michaelmas (29 September), although in the 1440s and 1450s fourteen- and twenty-one-year leases became common. Records indicate that there was typically a regular turnover of tenants and even before the Black Death holdings regularly changed hands. In west and central Duchy manors, for example, more than half of tenants were different at the assession roll of 1347 as at the Caption of Seisin in 1337 (Hatcher 1970a, 98). During the 14th and 15th centuries most tenants had a single holding, generally small holdings of less than 20 acres or medium ones of 20-40 acres. Subletting of some of the larger holdings was common, however, they often being held by Duchy officials and then sub-let (Hatcher 1970a, 139; 233-4). The most valuable holding in Liskeard manor, for example, was that of Henry Gartha who had a total of 8 messuages of 207 acres in 1427, mainly around Trevelmond (Hatcher 1970a, 250). At the assession seven years earlier he only held a single messuage of 22 acres.

The system of conventionary tenure was also adopted by other major landholders, to varying degrees, including by the Arundells of Lanherne. With both the Duchy of Cornwall and with the Arundell estates, the result seems to have been a regular turnover of tenancies. On Duchy estates, tenants were free to take up or leave tenancies (subject to their contractual obligations) in what was effectively the creation of an open market in agricultural land (Hatcher 1970a, 56). This type of arrangement was very different to those existing in most other parts of England, where there was ‘more of an emphasis on continuity’ (Hatcher 1970a, 57). This could therefore have led to the amalgamation of holdings, as certain individuals increased their landholding (engrossments).

Table 9.3: Distribution of Duchy of Cornwall holdings, 1337-1504, selected parishes (from Hatcher 1970, Table 17, 226).

1. Climsland

Year	Source	Tenants leasing more than one holding	Holdings leased
1337	Caption of Seisin	0	102
1347	Assession Roll	0	100
1356	Assession Roll	6	97
1364	Assession Roll	5	101
1371	Assession Roll	10	99
1392	Assession Roll	14	96
1406	Assession Roll	15	100
1427	Assession Roll	13	94
1441	Assession Roll	12	97
1448	Assession Roll	12	102
1469	Assession Roll	17	101
1504	Assession Roll	17	102

2. Liskeard

Year	Source	Tenants leasing more than one holding	Holdings leased
1337	Caption of Seisin	2	85
1347	Assession Roll	3	80
1356	Assession Roll	4	72
1364	Assession Roll	7	72
1371	Assession Roll	12	80
1392	Assession Roll	12	79
1406	Assession Roll	8	75
1427	Assession Roll	11	78
1448	Assession Roll	10	78
1469	Assession Roll	14	74
1504	Assession Roll	14	80

This trend for increasing engrossment can be seen in Table 9.3, relating to the manors of Climsland and Liskeard. The evidence would seem to suggest, however, that landlords were often keen to maintain individual holdings intact, including any houses and outbuildings, even when two or more were rented by the same individual. This was presumably to maintain flexibility in the next round of assessions. The development and maintenance of the system of conventionary tenure may therefore have helped to maintain a more fragmentary system of landholding in Cornwall, in an effort by landlords to

preserve individual lots. Although there is some evidence that the system was employed in Devon it seems to have been much less common (Finberg 1969a, 249-52; Hoskins 1954, 90), one example of this being in the manor of Molland (Page 1906).

Towns

In Chapter 7 the association of open field with the four boroughs located within the local study area was described. It was seen that extensive, well-developed field systems with both strip-based fields and cropping units were evident around Launceston, Liskeard and Lydford, with some evidence that it had also been present around Tavistock. The very obvious association between towns and open field in the South West had, in the past, led to claims that it was an essentially urban phenomenon and, by implication, of Anglo-Saxon origin. There is no actual evidence that this as the case, but it may be that the formal organisation of boroughs and their large, organised open fields, did exert some influence on the organisation of smaller, rural settlements.

A second issue which will need to be borne in mind is the economic influence of the towns on their hinterlands. This applies both to those towns within the local study area as well as a number of important towns beyond its limits, such as Plymouth and Okehampton. This is difficult to quantify in terms of settlement and open field within the local study area, although some gaps in the patterns described in Chapters 5-8 do appear to be in proximity to some of the towns. Therefore, South Petherwin, to the south of Launceston, has a relative absence of nucleated settlement and of open field, as does the territory around the town of Callington.

Cultural Identity and Place-Names

Previous Work

As is soon obvious to most travellers crossing the River Tamar into Cornwall, there is a patent difference in the forms of many place-names found in Cornwall to those seen in the rest of England, with very many place-names of Brittonic

derivation; the Cornish language has therefore left its mark on the landscape of Cornwall. Linguistic differences are often equated with cultural distinctiveness, which could conceivably be manifested in aspects of the historic landscape, over and above the simple naming of places. It was therefore felt that testing the distribution of certain key place-name terms against those aspects of the historic landscape which are under study here – settlement nucleation and the distribution of open field – might be a fruitful avenue of research.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 9.9: Distribution of selected place-name elements across Cornwall and Devon: A – Cornish 'tre' *hamlet, farmstead; B – Cornish* 'bod' *dwelling; C – Old English* 'tun' *farmstead, settlement; D – Old English* 'cot', *cottage. (From Kain and Ravenhill 1999, Maps 13.1, 13.2, 13.3 & 13.5)*

The majority of Brittonic place-names are thought to have had their origins in the mid-1st millennium (Padel 1985; 1988; Rose and Preston-Jones 1995), with their displacement in parts of east Cornwall by Old English place-name forms taking place following the political takeover of what was to become Devon during the course of the 7th and 8th centuries. The distribution of the Cornish

place-name element *tre-* and of the Old English elements *-tun (ton*), *-cote* and *-worthy* in east Cornwall were described and illustrated by Preston-Jones and Rose (1986, 141-5; Fig 3 and see Figure 6.1), based on work undertaken by the Cornwall Archaeological Unit and using an index of place-names produced by Padel. A series of maps covering Cornwall and Devon were also provided by Padel in Kain and Ravenhill (1999) and are reproduced here in Figure 9.9. They pointed to the relative scarcity of *tre-* names in the north-east of Cornwall, north of the River Ottery, where names in *-tun* were common, suggesting that farms in this area had simply been renamed (Preston-Jones and Rose, 1986, 142). It was also noted that place-names in *-ton* were common in south-east Cornwall, between the rivers Tamar and Lynher and also around Hingston Down, as well as a thin spread 'along the south side of Bodmin Moor and particularly around Bodmin and Lostwithiel' (Preston-Jones and Rose, 1986, 142). One explanation put forward was that these represented English settlers colonising previously well-wooded areas (Preston-Jones and Rose, 1986, 142-3), though this seems at variance with most modern interpretations of the evidence. Kirkham (2005) has also noted a cluster of English names in *-ley* around Bodmin, which he suggested may represent colonisation or relate to the new urban settlement at Bodmin in the Late Saxon period. Theories of population displacement are now out of fashion, however, with cultural / linguistic influences perhaps being just as valid explanations for variation in place-names across Cornwall.

As has been highlighted by Preston-Jones and Rose (1986) and others, what is interesting for the purposes of this study is that there is actually some variation in the distribution and frequency of Brittonic place-names across east Cornwall itself. It was therefore felt worthwhile to examine potential correspondence between the patterns of nucleated settlement and open field identified in this study and the relative distributions of Brittonic and Old English place-names within the local study area. If there did prove to be a correspondence between, for example, open field and either Brittonic or Old English place-names, then an origin for communal farming methods in the late 1st millennium might be suggested.

Distribution of Brittonic Place-names in the Local Study Area

The most common Cornish place-name element is *tre*-, which is usually rendered as estate or farmstead (Padel 1985, 223), and is sometimes equated with Old English *-ton (tun)* (Preston-Jones and Rose 1986, 142). A survey of the local study area shows that other common Cornish place-name elements are also present, though in lower numbers, the most common being *pen*- (head, top, end), *pol*- (pit, pool, stream), *bod*- (dwelling), *lann*- (enclosed cemetery) and *hendre* (winter homestead, home farm) (Padel 1985, 17-80; 187-9; 23-5; 142-5; 129). As with Cornwall generally, by far the most prevalent in the local study area was *tre*-, with relatively few of the other place-name elements occurring.

To test possible associations, a rapid assessment was made of the incidence of Cornish place-names in the local study area using the principal place-name elements plus others of known Brittonic origin, such as *gelly/kelly* (grove), *men/maen* (stone) and *cos/quite* (wood) (Padel 1985, 47, 161-2, 66-8). Few such place-name elements occur in the local study area to the east of the River Tamar and so statistics were not sought for those parishes, although a brief review of the incidence of *-ton*, *-worthy*, *-cote* and *-bearu* was made (and see Figure 9.9). The percentage of place-names with Cornish elements in each parish was calculated and compared with the findings of Preston-Jones and Rose (1986), and a summary of the findings is presented in Table 9.4.

The results confirmed that those parishes with the lowest percentages of Cornish place-name elements were indeed those found to the north of the River Ottery, as well as in some other Cornish parishes bordering or close to the River Tamar. Therefore, in the north, Boyton had no place-names with Cornish elements, North Petherwin had 9%, North Tamerton had 16% and Werrington had 3%. At the same time, all of these parishes had settlements with names in *-ton* (4, 1, 3 and 3 respectively), with various numbers of *-worthy*, *-cott* and *-bearu* as well. To the south of Launceston, some border parishes also had low percentages of place-names with Cornish elements; therefore, Lawhitton had a rate of 9%, Calstock was at 2%, St Dominick was at 3%, whilst St Mellion had none. Further to the west, away from the Tamar, St Ive was at 9%. Most other parishes further west of the River Tamar exhibited much higher percentages of

Cornish place-name elements. Therefore, in the north-west of the local study area, Davidstow had 63%,Treneglos had 69% and Laneast had 70% of place-names with Cornish name elements, whilst on the east side of Bodmin Moor, North Hill was at 35%, and in the south-east Menheniot was at 67%. More moderate percentages were seen with St Neot at 26%, St Cleer at 35%, Liskeard at 41% and Quethiock at 27%, all lying on the south side of Bodmin Moor.

This brief survey would therefore seem to confirm the previously noted pattern of Brittonic place-name distributions, with the near total absence of place-names with Cornish elements to the north of the River Ottery and also in some border parishes further south. St Ive would seem to fit the proposition of Preston-Jones and Rose (1986, 142), of greater English influence to the south of Bodmin Moor, although the adjacent parish of Menheniot has a high incidence of Cornish place-names, with moderate numbers in Liskeard, Quethiock, St Cleer and St Neot.

The next step was to compare the incidence of place-names of Brittonic origin with patterns of settlement nucleation and distribution of open field identified in this study. If the four Cornish parishes to the north of the River Ottery, of North Tamerton, Boyton, North Petherwin and Werrington, are first taken as a group, it can be seen that all have moderate settlement nucleation and lower incidences of strip-based fields, as well as having few settlements with Cornish place-name elements. This pattern is not, however, repeated across other parts of the local study area. Therefore, parishes further south which border the River Tamar – Calstock, St Mellion and St Dominick – are all dominated by Old English place-names but at the same time are characterised by both nucleated settlement and high incidences of strip-based fields. Further to the west, the parishes of North Hill, South Hill and Lezant are all characterised by nucleated settlement and strip-based fields, whilst having higher incidences of settlements with Cornish place-name elements. This brief study has therefore shown that there is no clear correlation between settlements with either Cornish or Old English place-names and the pattern of settlement nucleation or open fields in the Cornish part of the local study area.

Table 9.4: Incidence of Brittonic place-names as percentage of all recorded place-names (Cornish parishes).

Parish	Tre-	Pen-	Pol-	Other Brittonic	All Brittonic	All	% Brittonic
Tresmeer	5	0	0	0	5	5	100
Laneast	5	0	0	2	7	10	70
Treneglos	9	0	0	0	9	13	69
Menheniot	19	7	0	3	29	43	67
Davidstow	17	0	0	2	19	30	63
Trewen	2	0	0	1	3	5	60
Warbstow	9	2	0	1	12	21	57
Altarnun	27	0	2	8	37	67	55
Lewannick	8	0	1	1	10	23	43
St Thomas	5	0	0	1	6	14	43
Lezant	10	2	0	2	14	33	42
South Petherwin	14	0	0	0	14	33	42
Liskeard	19	3	0	8	30	74	41
St Clether	8	1	0	0	9	23	39
Egloskerry	5	2	0	0	7	18	39
St Cleer	20	2	0	4	26	75	35
North Hill	12	1	0	4	17	48	35
Callington	1	3	0	2	6	18	33
South Hill	8	1	0	1	10	33	30
Quethiock	6	1	0	1	8	30	27
St Neot	15	2	1	7	25	95	26
Pillaton	4	0	1	0	5	21	24
Stoke Climsland	7	0	1	4	12	63	19
St Mary	0	1	0	0	1	6	17
Linkinhorne	9	1	0	0	10	67	15
Tremaine	1	0	0	0	1	8	13
Lawhitton	2	0	0	0	2	22	9
North Petherwin	0	2	0	2	4	47	9
St Ive	2	2	0	0	4	46	9
St Stephen	1	0	0	1	2	27	7
North Tamerton	2	0	0	0	2	32	6
Werrington	0	0	1	0	1	31	3
St Dominick	0	0	0	1	1	30	3
Calstock	1	0	0	0	1	42	2
Boyton	0	0	0	0	0	22	0
St Mellion	0	0	0	0	0	13	0

A brief survey was also undertaken of the distribution of certain common Old English place-name elements within the local study area. As has been noted, *-ton* is usually rendered as 'farming estate', being derived from Old English *tun* (Cameron 1996, 143). *Cott/-cote* (cottage or dwelling) is found in north and west Devon, often in the same areas as *-ton*, although with a wider distribution onto some more marginal land (Hoskins 1954, 4; Rippon 2012, 74). *Worthy* (enclosure, farmstead) is also common in the north and west of Devon (Hoskins 1954, 4; and see Figure 9.9). It has been suggested that settlements in *-ton* cluster on the better agricultural land, whilst *-worthy* is found more often on the moorland fringes, for example on the edge of Dartmoor, and could therefore represent later, less important settlement (Faith 2006). In looking at the

distribution of these place-name elements across the local study area, however, it was noted that their numbers were actually fairly low. Therefore, on the Culm Measures, the parish of Ashwater had only one settlement in *-ton*, one in *-cott* and three settlements with names in *-worthy*, perhaps reflecting the more marginal nature of the landscape. Similarly, on the west side of Dartmoor, Peter Tavy has no *-ton* or *-cott* names, but three settlements named in *-worthy*. These contrast with Milton Abbot in the more settled Tamar valley, with no less than five settlements named in *-ton*, four in *-cott*, but none in *-worthy*.

Discussion

This chapter has sought to assess patterns of settlement nucleation/dispersal and the distribution of possible open field identified in this study, against common explanations advanced for the formation of the historic landscape. Environmental factors will always have an influence on human activity, and this is certainly manifested in the difficulties of attempting arable farming on Bodmin Moor and Dartmoor. A strong correlation was also shown, however, between the settlement and field system patterns of HLCA 1 and the soils of the south-western Culm Measures. Possible reasons for the correspondence will be explored in Chapter 10, but it will be noted that, apart from the high moorland areas, in the local study area these are some of the hardest soils to work with ploughs.

To the south of a line approximately following the rivers Ottery and Thrushel, there is greater uniformity in the landscapes, with more easily worked brown earths predominating. Settlement and field system patterns vary across the area, however, with the most pronounced differences seen between adjacent areas of east Cornwall and south-west Devon (HLCAs 2 and 3 respectively). Reasons for this which have been explored include the control of Tavistock Abbey in south-west Devon and the relative dominance of the Duchy of Cornwall and the practice of conventionary tenure in east Cornwall. Human agency would seem to have been more important in these areas, but exactly how it was manifested – whether as a result of decisions made at the level of lordship, or more haphazardly at the local level – is difficult to answer. One

problem, for example, lies in whether open fields had been present in any numbers in south-west Devon or not, with documentary and evidence derived from historic maps seemingly contradictory.

It is suggested that the problem with these interpretations is that they ignore the complex interplay of many different potential factors which, over time, can contribute to the formation of the historic landscape. Farming techniques and settlement will to an extent be influenced by the constraints of the natural environment, but such limitations can in part be overcome by human intervention, when there are sufficient incentives, and by the adoption of new farming methods and technologies. Crucially, such single-causal explanations also ignore time depth. At the height of the Middle Ages, at a time of population growth in the 10th-14th centuries, there was an obvious incentive to convert more marginal areas of land to arable or mixed farming regimes. In common with continental Europe, England then went through quite profound social and economic changes following the substantial falls in population consequent upon the famines and plagues of the first half of the 14th century and there was a retreat from many of these areas, certainly where arable cultivation was concerned. The next chapter considers in more detail how far these late medieval developments may have influenced the formation of the historic landscape of the South West.

10

Enclosure and Diversification

Introduction

The focus of Chapter 9 was an evaluation of late medieval settlement distribution and patterns of former open field set against some of the principal models traditionally used to interpret the formation of historic landscapes. As such, there has long been a divide amongst researchers between those who emphasise the pre-eminence of the natural environment in, for example, the establishment and distribution of open field, and others who regard certain aspects of human agency, such as lordship, as having been of greater importance.

Chapter 9 was structured in such a way as to analyse this dichotomy. Therefore, the *pays* identified in Chapter 3 are based on criteria related to the natural environment, principally topography, geology and soils. The historic landscape character areas of Chapter 8, on the other hand, deal with the human environment, the distribution of settlement and of former open field. Comparison of the two schemes in Chapter 9 suggested correlation in some areas – principally between HLCA1 and the Culm Measures – but not elsewhere. Variations in relative settlement nucleation/dispersal and of the extent and quality of evidence for former open field across the remainder of the local study area could not be so explained. Differences might be related to the direction or influences of particular landlords, particularly the Duchy of Cornwall and Tavistock Abbey, but such correspondences are only hinted at and are still not fully understood.

That no one clear-cut causal explanation can be found for the settlement and field system variations observed in the historic landscape of the local study area therefore requires further investigation. It will be proposed here that such a dichromatic approach as was used in Chapter 9 is too simplistic to adequately explain the historic landscape of the South West. Firstly, it overlooks the complex interrelationships between the natural environment and human activity and, crucially, omits to consider time-depth. This landscape study of Cornwall and Devon principally covers the period from the late 13th century to the mid-19th century, over which time there were quite profound changes in both population levels and in how the countryside was organised and managed. These changes may not have affected all parts of the local study area in the same way, at the same time or to the same extent.

The first section of this chapter deals with the evidence for loss and contraction of settlement in the South West over this time-period. It will be argued that prior to the 14th century, open field was present across much of the local study area and that field patterns observed in the 19th-century OS maps reflect differential processes and/or timing of enclosure. The next section examines possible processes of enclosure by looking at patterns of land ownership and occupancy at the time of the tithe apportionments of the 1840s, using a number of examples from within the local study area which have either Category 1 or 2 field systems. This is followed by a consideration of two possible alternatives to explain the formation of these two different categories of field system, linked to the size of settlement on the one hand and subsequent economic changes in the South West on the other.

From this, it is suggested that the historic landscape of the South West was indeed to a large extent determined by events taking place in the countryside from the late Middle Ages onwards, linked to social and economic changes. This discussion will be expanded, with evidence for changes in population levels across the South West, based on studies of Domesday Book on the one hand, and later documentary sources, such as 14th-century poll tax returns, on the other. This will be compared with the results of other studies which point to

changing economic patterns, particularly the increasing trend for cattle and dairy farming across parts of the South West in the late Middle Ages.

Settlement Loss and Contraction

This first section will examine the evidence for rural settlement loss and contraction in the South West Peninsula during the late medieval and early post-medieval periods, following general population falls from the 14th century onwards. This will then be related specifically to trends noted in the local study area.

Documentary and Survey Evidence

As has been discussed in Chapters 6 and 9, documentary evidence attests to reductions in the number of tenancies in many townships during this period, as is demonstrated in, for example, the archives of the Duchy of Cornwall (Hatcher 1970a) and of the Arundell family (Fox and Padel 2000). Field survey in north-east Cornwall, undertaken in 1993 by the Cornwall Archaeological Unit, identified many shrunken settlements (Herring and Thomas 1993). The survey touched on the north-west corner of the local study area, including the parishes of North Tamerton, Boyton and North Petherwin, where earthworks of possible shrunken settlements were noted at Allisdon and Heydon in North Tamerton, with deserted settlements including Grays, also in North Tamerton (Herring and Thomas 1993, 18-19). It was suggested by the authors that if extrapolated across Cornwall there could be as many as 750 deserted and 1400 shrunken settlements represented, though as the survey covered the heavy clays of the Culm Measures this may well be an overestimate (Herring *et al* 2011b, 291).

Settlement Contraction within the Local Study Area

A brief survey of the local study area reveals a number of settlements which are known to have been deserted subsequent to the late medieval period, although the majority are on the uplands of Bodmin Moor and Dartmoor. The reconstruction of settlement patterns presented in Chapter 6 has also, by its very nature, revealed something of the patterns of settlement contraction within this part of the South West Peninsula, when compared with late 19th-century

settlement patterns shown in Chapter 5. Probable settlement contraction between the later Middle Ages and the 19th century across most classes of settlement was identified, though with some variation across the local study area.

To test how this variation has manifested itself across the local study area the four historic landscape character areas identified in Chapter 8 were appraised in turn. The pattern of shrinkage of small-sized hamlets to large isolated farmsteads was investigated first, representing between them the greatest number of settlements from within the local study area. A summary of the results is presented in Table 10.1. As will be seen, although this is based on the historic landscape character areas identified in Chapter 8, there was also some subdivision of Areas 2 and 3, to allow separation between highland and lowland areas.

To start with the Culm Measures, which comprises nineteen parishes, three of which are in Cornwall, the pattern seen here is of sixty-four of one hundred and fourteen hamlets shrinking to large isolated farmsteads, representing a figure of 56% in total. HLCA 2 was broken down into two parts. The group of parishes on the north side of Bodmin Moor, comprising Davidstow, Altarnun, Warbstow, Treneglos, St Clether, Tremaine, Tresmeer, Egloskerry and Trewen, take in much of the northern part of the moor and the slopes of the upper reaches of the Inny Valley. Of the forty-two settlements that in the later Middle Ages are thought to have been small hamlets, twenty-four had by the mid-19th century shrunk to large isolated farmsteads, representing 57% of the total. The greatest proportions were seen in Davidstow, with all eight small-sized hamlets having shrunk to large-isolated farmsteads, and Altarnun, with seven of fifteen having done so. The main part of the historic landscape area, however, reveals a different pattern. The thirteen parishes along the eastern flank of Bodmin Moor, essentially the part already identified as being the area characterised by greater nucleation of settlement and concentrations of strip-based fields, has a relatively low incidence of small-sized hamlets shrinking to large isolated farmsteads. Here the figure is twenty-seven out of one hundred and two, or

26%, and therefore a pattern very different to the remainder of the local study area.

In HLCA 3, for the Dartmoor fringe, comprising the parishes of Sourton, Bridestowe, Lydford, Mary Tavy, Peter Tavy and Whitchurch, the figure was thirteen of twenty-four, or 54%. This is also similar to the remaining Devon parishes, to the south of the River Thrushel, with thirty-seven of sixty-one small-sized hamlets shrinking, or 61% of the total.

Table 10.1: Shrinkage of Small-Sized Hamlets to Large Isolated Farmsteads

Area	**Small-Sized Hamlets (Late Medieval)**	**Number Shrinking**	**Percentage Shrinking**
1. Northern Sector (HLCA 1)	114	64	56
2. Northern Bodmin Moor (HLCA 2)	42	24	57
3. East Cornwall (HLCA 2)	102	27	26
4. Western Dartmoor (HLCA 3)	24	13	54
5. South West Devon (HLCA 3)	61	37	61
6. South East Cornwall (HLCA 4)	78	34	44
Totals	**421**	**212**	**50**

1. North of rivers Ottery and Thrushel – parishes of North Tamerton, North Petherwin, Boyton, Werrington, Ashwater, Clawton, Ashbury, Tetcott, Luffincott, St Giles-on-the-Heath, Virginstow, Broadwoodwidger, Black Torrington, Halwill, Germansweek, Highampton, Beaworthy, Northlew, Bratton Clovelly.

2. Between rivers Inny and Ottery – parishes of Warbstow, Davidstow, Altarnun, Treneglos, St Clether, Tremaine, Tresmeer, Egloskerry, Trewen.

3. Between eastern Bodmin Moor and River Tamar – parishes of Lewannick, South Petherwin, Lawhitton, North Hill, Lezant, Linkinhorne, South Hill, Stoke Climsland, Callington, Calstock, St Dominick, St Mellion, Pillaton.

4. West Dartmoor fringe – parishes of Sourton, Bridestowe Lydford, Mary Tavy, Peter Tavy, Whitchurch.

5. South of River Thrushel – parishes of Lifton, Stowford, Marystow, Lewtrenchard, Coryton, Kelly, Bradstone, Dunterton, Milton Abbot, Sydenham Damerel, Lamerton, Brentor, Tavistock.

6. South Bodmin Moor – parishes of St Neot, St Cleer, Liskeard, Menheniot, St Ive, Quethiock.

On the south side of Bodmin Moor, including St Neot and St Cleer, two parishes which include large tracts of moorland, as well as the lower lying parishes of Liskeard, Menheniot, St Ive and Quethiock, the figure was thirty-four of seventy-eight, representing 44% of small-sized hamlets shrinking to large isolated farmsteads. Within this, the breakdown for those parishes with the greatest proportions was ten of nineteen for Liskeard, five of ten for St Ive, seven of twelve for St Cleer.

The pattern of settlement contraction seen across the local study area is therefore mostly fairly consistent, varying from between 44% and 61% of small-sized hamlets shrinking to large isolated farmsteads. The notable exception to this is the main part of HLCA 2, to the south of the River Inny. Contraction of settlement in this part of the local study area, at 26%, was much less marked.

Trends with regards to medium- and large-sized hamlets are more difficult to analyse due to the smaller number of settlements involved. For Cornwall as a whole, forty medium-sized hamlets were seen to have shrunk to small-sized hamlets, with no particular dominance in any one parish, with ten large-sized hamlets shrinking to medium-sized hamlets. For Devon, the figures are seventeen and five respectively, though against a backdrop of fewer medium- and large-sized hamlets overall.

Dispersed Settlement

A second related trend taking place in the South West from perhaps as early as the late 13th century onwards was settlement dispersal. Herring (1986; 2006b) identified the process at Brown Willy, with the constituent farms moving out from the original core hamlet and becoming more evenly distributed across the original townlands. This would also be linked to processes of enclosure where each of the new farms would now often be at the centre of its own field system.

One particular aspect where this process may be visible in the landscape is the incidence of linked farmsteads (Table 10.2). Here, the assumption is that farms / settlements sharing the same name but distinguished by descriptors, such as Higher or Lower, represent the dispersal of farms from a former hamlet. This

process of settlement fragmentation may have taken place over a long period of time, though in some cases this could still be early (see Chapter 6). It was noted in Chapter 6 that although linked farmsteads are distributed right across the local study area, there are slightly denser concentrations in some parts. In terms of raw numbers, and starting with HLCA 4, the most noticeable concentrations are in the southern Bodmin Moor parishes of St Neot, with eleven, and St Cleer, with nine linked farmsteads, consistent with dispersal of settlement along the southern half of Bodmin Moor. There were also, however, relatively large numbers in Liskeard, with seven, and St Ive, with five, where, we might recollect, there were also higher proportions of cropping units.

Table 10.2: Incidence of linked farmsteads by parish (3 settlements or above).

Parish	**Linked Farmsteads**	**Range of Descriptors**
St Neot	11	Higher, Lower, Great, Little, Inner, East, West
St Cleer	9	Higher, Lower, East, West
Linkinhorne	9	Higher, Middle, Lower, Great, Little, North, South
Stoke Climsland	7	Higher, Middle, Lower, Little, North, South
Liskeard	7	Higher, Middle, Lower, Great, Little, Old, North, South, East, West
Whitchurch	7	Higher, Middle, Lower
North Petherwin	5	Higher, Lower, North, South
St Ive	5	Higher, Lower, Great, Little, East, West
Warbstow	4	Higher, Little, East
North Hill	4	East, Middle, West
Menheniot	4	Higher, Lower, Little, South
Broadwoodwidger	4	Higher,Middle, Lower, East, West
Bratton Clovelly	4	Great, Little, East, West
Sourton	4	Higher, Middle, Lower, East, West
Treneglos	3	Nether, Lower, Little
Altarnun	3	Higher, Lower, Little, South, West
Pillaton	3	North, South, East, West, Lower
Mary Tavy	3	Higher, Lower, Great, Little
Lamerton	3	Higher, Middle, Lower

Overall, there are actually lower numbers of linked farmsteads in Devon, though with the highest numbers being seen along the western Dartmoor fringe, in HLCA 3. In Whitchurch, for example, there were seven, in Sourton there were four, and on Broadbury Ridges, with Broadwoodwidger and Bratton Clovelly, there were four in each parish. In Cornwall to the north of the Ottery, both Warbstow and North Petherwin had relatively high numbers of linked farmsteads, at four and five respectively, again being located on the Culm

Measures. Overall, there are therefore elevated levels of linked farmsteads in moorland fringe locations and, interestingly, on the Culm Measures, which may perhaps be a further indication of a retreat from marginal areas from the late medieval period onwards.

Land Ownership and Occupancy

Understanding the processes which led to the formation Category 1 field systems, dominated by strip-based fields, and Category 2 field systems, largely composed of cropping units, was felt to be a key theme in decoding the history of the historic landscape of the South West. It was seen with the documentary evidence presented in Chapters 7 and 9, that many hamlets saw a gradual reduction in the number of tenants in the late medieval period. The evidence from, in particular, Duchy of Cornwall records, also indicates that in many cases the number of tenements within many townships remained the same over this period, even if the number of tenants fell, with some tenants being in possession of more than one holding. Some engrossment of holdings did undoubtedly take place, although it was by no means universal.

It has also been proposed that at the time of enclosure, settlements with fewer tenants were more likely to arrive at more equitable allocations of strips in the former open field, with perhaps more consolidated holdings and larger fields (Herring 2006a, 60-1; and see Chapter 7). Conversely, it is argued, larger settlements with many more tenants would lead to more fragmented patterns of land ownership and/or occupancy post-enclosure, reflected in the survival of more strip-based fields preserved in the field boundary patterns. The implication of this proposition is that larger settlements resulted in more fragmented patterns of ownership and/or occupancy at the point of enclosure. Whether this was actually the case within the local study area will be examined in more detail later in this chapter, for example using morphological and archaeological evidence to identify lost field boundaries.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.1: Plan of fields around the hamlet of Bowithick, Altarnun, based on an extract from the Tithe Apportionment Map of 1840. The various tones represent different occupiers and show intermixing of holdings in the enclosed strip field system, with quite a high degree of grouping together of fields. (From Herring 2006, Figure 28, 64).

A number of studies using tithe map evidence have previously been used to identify former open field, by examining patterns of land ownership and occupancy at the time of the tithe awards (Herring *et al* 2006a; Sandover 2012; Ryder 2013; and see Figure 10.1). It was recognised that such a detailed study would be too involved and time consuming for the present thesis, involving transcription of detailed tithe maps into ArcMap. It was thought worthwhile,

however, to look at the patterns of land ownership and occupation in a selected number of parishes in the local study area, by looking at the data contained in the tithe records.

As part of the process of tithe apportionment for each parish, three documents were produced, including a map of the land holdings, with each field numbered, and a schedule of owners and occupiers for each parcel of land. It is therefore a simple process to select specific settlements and their associated fields and to review the list of owners and occupiers, to gain a sense of just how mixed or consolidated were the landholdings at this point in time. For this study, examples of settlements with either Category 1 or 2 field systems were selected. For strip-based fields, the hamlets of Harrowbarrow and Metherell in the Cornish parish of Calstock have already been described, the many long narrow fields also resulting in a fragmented pattern of land occupancy after enclosure (Figure 7.6). Of the two, Herring (2006a, Figure 24, 60) illustrated the field patterns of Metherell in his description of Cornish strip-fields, with fifteen tenancies identified in 1337.

Another particularly well-preserved system of strip-based fields is to be found at the former town of Lydford (Shorter *et al* 1969, Fig.28, 114). The tithe survey was undertaken in 1846, listing 288 parcels of land, including cottages and gardens, arable, pasture and meadow. Twenty-eight landowners are listed in the tithe apportionment, the main ones being John Gubbins Newton (owner of Millaton House in Bridestowe), Roger Philips and Walker Ratcliffe, with also both Lydford and Mary Tavy parishes owning parcels, as well as some held as glebe land (Reverend John Fletcher). Twelve parcels of land are also described as ‘road and waste’. In most cases, occupiers are different to the landowners, with a total of 58 listed. Some, such as Nicholas Rayment, Richard Friend, Thomas Tapson and Valentine Powell, held many parcels, for example Thomas Tapson with 39, although the large number of names overall does point to a high degree of fragmentation, with William Gill, for example, holding only 7 parcels. Taking an extract of the map showing the fields on the north-eastern side of the village, intermixing of tenancies is evident (Figure 10.2). On the tithe map, fields 16-19 were held by Nicholas Rayment, then field 15 by Thomas

Tavener, 13 and 14 by Richard Friend, and 138, 139 and 140 by Valentine Powell.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.2: Extract from the 1846 Lydford tithe map, showing the large number of strip-based fields surrounding the settlement. Holdings amongst the block of fields in the centre of the extract were held by Nicholas Rayment, Thomas Tavener, Richard Friend and Valentine Powell (Devon County Council Historic Environment Viewer/ESRI).

The next parish examined was that of Brentor, with the apportionment dating to 1842. There were far fewer parcels of land than was the case with Lydford, at forty-four, six of which were of common land, with the remainder being mainly arable, pasture and 'furse' (ferns). This apportionment shows an even greater fragmentation of land ownership and occupancy, with 16 landowners listed, including the Duke of Bedford, and 26 occupiers, most holding 1-3 parcels of land each. Therefore, Elias Row Tooker held three parcels and Thomas Hill held two.

The tithe apportionments for two Category 2 field systems (dominated by cropping units) were also examined. One of the most extensive in the local study area is that surrounding the settlement of Quoditch in the Devon parish of Ashwater, on the Culm Measures. The tithe apportionment for Quoditch was undertaken in 1842. Concentrating solely on the agricultural land around

Quoditch itself, and not including enclosed moorland, the apportionment lists six holdings (Figure 10.3). The first of these, with forty-seven parcels of land, was both owned and occupied by Sampson Beale. The other five holdings, comprising a total of 91 parcels of land, were all owned by Richard Preston but were let to Benjamin Baskerville, Samuel Balhatchet, Thomas Baskerville, Thomas Baskerville Junior and Peter Spry. Whilst not plotted in this study, it would appear from the consecutive numbering that the holdings were of adjacent plots, pointing to fairly consolidated holdings. For example, the block of fields to the top left of the settlement in the tithe map extract (Figure 10.3), fields 1199-1207, were all under the control of Sampson Beale. Also, it is noticeable that more field boundaries are shown on the tithe map than on the 1888 OS map, for example in the fields between the settlement and the River Carey (for comparison see Figure 7.7).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.3: Extract from the 1842 Ashwater tithe map, focussing on the settlement of Quoditch (oriented with west to the top). At that time the block of fields to the top left of the settlement were all held by a single tenant, Sampson Beale (Devon County Council Historic Environment Viewer/ESRI).

As a second example, we now turn to the parish of Bridestowe, in 1841, looking in particular at two settlements within the parish. The first of these is Ebsworthy

(Elsworthy Town), which when examined in this study comprised a mixture of some strip-based fields but a greater area of cropping units, and in the apportionment consisted of a mixture of mainly arable, with some pasture and also woodland. The main part of the settlement was divided into two holdings, with 20 parcels owned by John Gubbins Newton, with all let to John Parsons, and a second, larger holding of 49 parcels owned by John Morth Woollcombe, with all let to William Palmer. The map extract from the apportionment (Figure 10.4) shows a block of narrow fields on the east side of the settlement (fields 195-197, 206-211) which were nearly all leased by William Palmer at the time of the apportionment. A block of larger fields immediately to the south of the lane (fields 181-194) were also let to William Palmer.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.4: Extract from the 1841 Bridestowe tithe map, focussing on the settlement of Elsworthy Town (Ebsworthy). William Palmer leased the strip of narrow fields to the north of the lane on the east side of the settlement and also the larger fields to the south (Devon County Council Historic Environment Viewer/ESRI).

A similar pattern is seen at Bidlake (Great and Little), one of the better examples of cropping units in the local study area. At the time of the apportionment, all of the land associated with the settlements was owned by the Rev. John Woollocombe (*sic*), with the 43 parcels of mainly arable land at Great Bidlake let to Thomas Mason, and the 21 parcels of land at Little Bidlake let to

Priscilla Rule. In both of these cases, therefore, there is a coincidence of larger fields, represented by cropping units, and quite cohesive land holdings held in the hands of two tenants.

It has already been suggested that there is good evidence for cropping units having once been open field, albeit they are morphologically different from strip-based fields in that their constituent fields are larger, presumably being amalgamations of many more former strips. The brief survey of tithe apportionments presented in this section indicates that when the tithe surveys were being undertaken in the 1840s, strip-based fields tended to be characterised by many more tenancies than was seen with field systems which were dominated by cropping units. Although not a comprehensive survey of the local study area, there does seem to be a consistent pattern.

A variety of alternative explanations present themselves. Firstly, there could be a simple correlation between size of settlement (therefore number of tenancies) and association with either strip-based fields (Category 1 field systems) or cropping units (Category 2 field systems). With fairly standard allocations of land per holding in the medieval period suggested (Dyer 2002, 21-4; Hatcher 1970, 11; Finn 1973, 70), larger settlements should equate to more extensive field systems. By extension, the logical implication of this is that strip-based fields should on average cover larger areas than cropping units. Alternatively, it could be that in some cases settlements saw greater contraction in size prior to the 1840s tithe apportionments than did others, leaving fewer tenants at that point in time. This would explain the survival of cropping units covering more extensive areas than would otherwise be expected (if indeed this is the case). A third alternative is that similar processes of enclosure took place with Category 1 and 2 field systems, but that the difference in morphology may have arisen over time because of the subsequent loss of many more field boundaries post-enclosure with the latter than with the former. These alternative scenarios will be examined in the following sections.

A corollary of the above discussion of Category 1 and 2 field systems is that some former open field may not have been identified in this study, and this

could have a particular implication for the south-west Devon parishes of the local study area (HLCA 3). It is in this area that Category 3 fields are in more significant numbers, and given Finberg's documentary evidence for open field once being present in the parish of Tavistock it is a possibility that some were indeed once open field.

Processes of Enclosure

In Chapter 7 it was posited that both Category 1 and 2 field systems were ultimately derived from former open field. It was also shown in the previous section that at the time of the tithe apportionments in the 1840s the former were more likely to be characterised by more complicated patterns of land ownership and occupancy than were the latter. A number of alternative processes could be put forward to help explain these differences. The first has already been outlined above and sees a direct correlation between the number of tenants in a settlement and consequently the ease with which enclosure could be achieved. Other explanations could be the timing of enclosure or alternatively be the result of differential physical processes acting upon field systems post-enclosure.

Settlement size in relation to extent of open field

Field systems in the South West were enclosed earlier than in other parts of England (Fox 1971; Fox and Padel 2000, lxviii-lxxvii; Herring 2006a, 58), and with parliamentary enclosure of former open field, as opposed to common land, relatively rare in the South West, enclosure by agreement would seem to have been the usual mechanism (Yelling 1977, 27).

The hypothesis is that the enclosure of the open fields of larger settlements would potentially lead to more fragmented patterns of landholding post-enclosure, with more strip-based fields preserved in the new field boundary patterns, as has been outlined above. The four most clearly defined strip-based field patterns in the parish of Calstock in 1337, for example, were Metherell, with fifteen holdings, Harrowbarrow with nine holdings, Latchley with eight holdings and Chilworthy with seven holdings (Herring 2006a, 62). The converse of this would be that the enclosure by agreement of the lands of smaller hamlets

would be easier to achieve, as two, three or four occupiers of individual holdings would, in theory, be more likely to come to some form of agreement in the sharing out of land. At the settlement of Bowithick in Altarnun, for example, there is evidence to show that some consolidation was carried out prior to enclosure, resulting in larger block-shaped fields, with parallel sides, held by five different occupiers (Figure 10.1). Assuming relatively standardised landholdings per tenant of, say, 30 acres, this would lead to the conclusion that Category 1 field systems (dominated by strip-based fields) should on average be more extensive than Category 2 field systems (based on cropping units).

It was therefore decided to test whether there was a correlation between settlement size, association with either Category 1 or 2 field systems and the extent of those field systems. Table 10.3 lists a selection of nineteen large-sized hamlets from across the local study area, ordered according to the estimated size of the associated field system. Of the sample, Metherell in the parish of Calstock had the largest field system (Category 1) at an estimated 390 acres, and Treovis in Linkinhorne had the smallest (Category 2), at approximately 50 acres. As will be apparent from the table, however, large-sized hamlets may be found associated with a range of sizes of field system. There was also no direct correspondence between extent of field system and field system category, whether Category 1 or 2.

The same procedure was repeated with a sample of seventeen medium- and small-sized hamlets and linked farmsteads (Table 10.4). The size range of possible open field systems was similar to that seen with large-sized hamlets, with Trevigro in South Hill being associated with a Category 1 field system of approximately 380 acres and East Kimber in Northlew having a Category 2 field system of approximately 65 acres. When ordered according to size of associated field system, however, Category 1 and 2 field systems were seen to be evenly distributed through the table. There therefore does not seem to be a simple correlation between strip-based fields or cropping units, extent of field system and, by extension, size of settlement.

Table 10.3: Selected large-sized hamlets and field system category.

Hamlet	**Parish**	**Field System Category**	**Acres**
Metherell	Calstock	1	390
Trevadlock	Lewannick	1	350
Quoditch	Ashwater	2	300
Meadwell	Kelly	2	250
Harrowbarrow	Calstock	1	240
Quethiock	Quethiock	2	235
Bowithick	Altarnun	1	220
Illand	North Hill	1	220
Trehunist	Quethiock	2	220
Bratton Clovelly	Bratton Clovelly	1	200
Mornick	South Hill	1	190
Trewidland	Liskeard	2	175
Trewint	Altarnun	1	140
Trenault	Trewen	2	125
Wilsworthy	North Tamerton	1	90
Billacott	North Petherwin	2	90
Upcott	Highampton	1	75
Trebeath	Egloskerry	1	60
Treovis	Linkinhorne	2	50

Table 10.4: Medium-sized, small-sized and linked farmsteads and field system category.

Hamlet	**Parish**	**Hamlet Type**	**Field System Category**	**Acres**
Trevigro	South Hill	Medium	1	380
Maxworthy	North Petherwin	Medium	1	350
Eworthy	Germansweek	Medium	1	200
Trekenner	Lezant	Medium	1	200
Eastcott	Northlew	Linked	2	200
Semersdown	North Tamerton	Medium	2	190
Foghanger	Milton Abbot	Medium	1	170
West Kimber	Northlew	Medium	2	160
Wollaton	St Mellion	Medium	1	160
East Chilla	Black Torrington	Medium	1	150
West Chilla	Black Torrington	Medium	1	130
North Beer	Boyton	Medium	2	130
Fursenewth	St Cleer	Medium	1	125
Quither	Milton Abbot	Small	1	90
Uppaton	Milton Abbot	Medium	2	75
East Kimber	Northlew	Medium	2	65
Forda	Milton Abbot	Small	1	60

One caveat to this exercise is that settlement sizes as presented in Chapter 6 are based on estimates of their extents in the late medieval period, the physical evidence not being of a sufficient quality to look further back in time. Some settlements may therefore have undergone contraction or engrossment of tenancies prior to this time.

Another process to be considered is the late medieval and early post-medieval preference for smaller field sizes. Fox and Padel (2000) refer to the preference for small closes, saying that in the South West they were generally smaller than the 10-acre fields often recommended by acts of parliament in the 18th and 19th centuries (Hoskins 1955, 145). In the manor of Downinney, in Warbstow parish, for example, the average size in 1566 was 3.8 acres, and in Cardinham 2.3

acres (Fox and Padel 2000, lxix). There was also much subdivision of fields over time. Therefore, in 1614 at Hornacott in North Tamerton, surveyors reported a 6-acre field was 'in three parts divided' (Fox and Padel 2000, lxx). Morphological evidence, however, would suggest that subdivision was most usually achieved by inserting cross-hedges, as can be seen in the case of Bowithick (Figure 10.1).

Post-enclosure loss of field boundaries

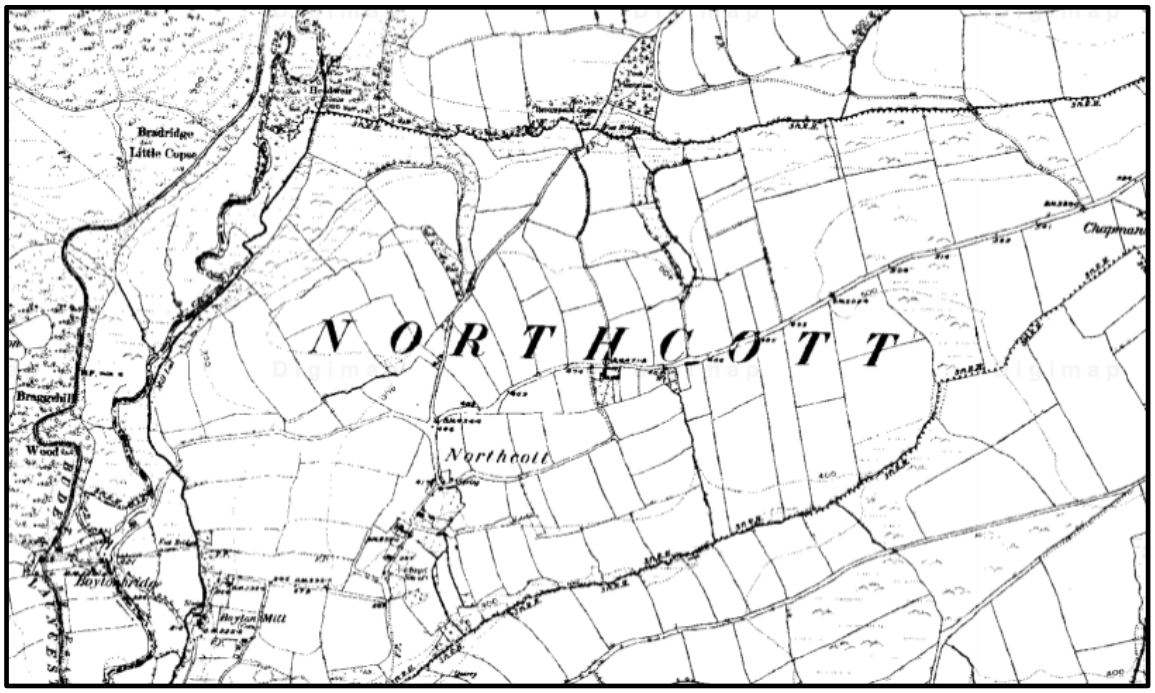
If there does not appear to be a satisfactory link between the size of settlement, extent of possible open field and association with either strip-based fields or cropping units, then one possible explanation could be that there has been greater subsequent loss of field boundaries with cropping units than was the case with strip-based fields, post-enclosure.

Evidence for loss of field boundaries has been identified by examination of aerial photographs through the NMP where, as has already been indicated, coverage is currently much better for Cornwall than for Devon (see Chapters 4 and 7). The results for both counties are, however, available on-line, through the county council on-line mapping facilities (Cornwall Council Interactive Map and Devon Environment Viewer). The first example is illustrated in Figure 10.5, relating to the hamlets of Tregue and Trecolas, in the parish of Altarnun. The fields surrounding the settlements were defined as being a Category 1 field system, and so a predominance of strip-based fields was already identified. Even so, a number of low earthworks identified through aerial photographs did indicate the presence of many more, now lost, field boundaries. These are particularly evident in the fields to the south-west of Tregue, where they are absent from the 1888 OS map.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.5: Possible Open Field Category 1 around the settlements of Tregue and Trecollas, in the parish of Altarnun. Narrow red polygons represent low banks identified from aerial photographs, with a number seen in the south-west group of fields that were otherwise classified as cropping units. Red outlined fields with arrowed lines indicated ridge-and-furrow identified from aerial photographs (Cornwall Council Interactive Map).

A second example relates to a settlement associated with cropping units, in this case fields around Northcott on the Culm Measures of north-west Devon (Figure 10.6). A small area of cropping units to the north of Higher Northcott Farm provides evidence for a number of lost field boundaries, which are again not evident on the 1888 OS map.



This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.6: Possible Open Field Category 2 around Northcott, formerly in the parish of Boyton (now the Devon parish of Northcott), as shown on the 1888 Six Inch to One Mile OS map (top), with an extract from the Cornwall Council Interactive Map (below). On the latter, narrow red polygons represent low banks identified from aerial photographs, with a number seen to the north of Higher Northcott Farm.

The brief survey of LiDAR data undertaken as part of this study did not find evidence for lost field boundaries, although a more detailed study of the range

of different survey data now available might in the future prove to be more successful. The best resolution was found to be with the Environment Agency LiDAR DSM 1m mapping, an example of which is shown in Figure 10.7. This is of fields surrounding the large-sized hamlet of Quoditch, in the Devon parish of Ashwater. The split screen shows a satellite image of the landscape in the top half with a section of LiDAR image below (these are not direct overlays but show adjacent areas).

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.7: LiDAR image of Quoditch, Ashwater, with satellite image above and LiDAR DSM at 1m resolution below. This is not a direct overlay but illustrates the quality of data available (Environment Agency DSM, via lidarfinder.com).

This process can also be confirmed by looking at the morphology of field boundary patterns, for example where there are irregular alignments and 'dog-legs' in the long axes of the cropping units. An example of this phenomenon may be seen with fields associated with the large isolated farmstead of Foghanger, in Milton Abbot (Figure 10.8), which is surrounded by cropping

units. Fields to the north-east of the farm show just such a distinctive dogleg, where a junction of lost field boundaries is suggested.

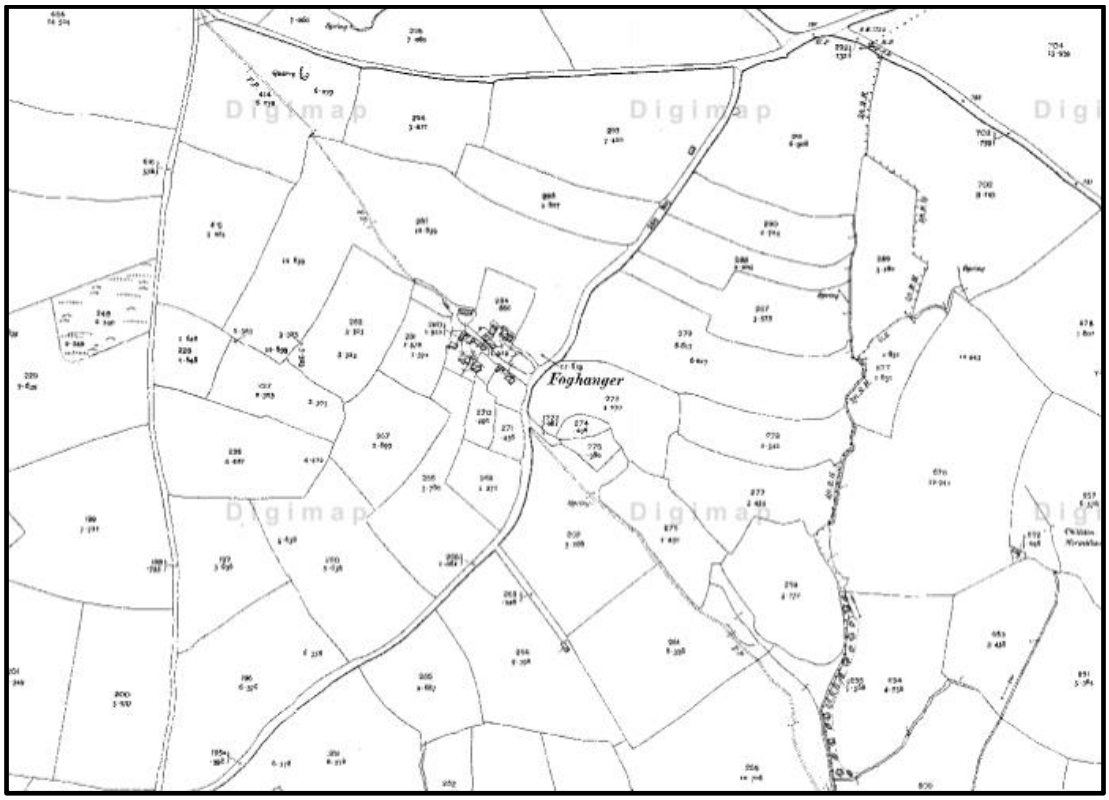


Figure 10.8: Cropping units around the large isolated farmstead of Foghanger, Milton Abbot, with doglegs in the field boundaries indicating the loss of some field boundaries. (Digimap: Twenty-five inch to One Mile OS map 1884).

What is not clear is whether the loss of field boundaries took place over a long period of time or if there has been a reorganisation of the landscape at a particular point in time. Whatever the processes and/or timings, it seems to have been of greater significance across parts of the Culm Measures (HLCA 1) and in Cornwall to the south of Bodmin Moor (HLCA 4). This assumes a piecemeal process in which small fields are created (strip-based fields) but for whatever reason many field boundaries are subsequently lost over time. This could be by engrossment of holdings (the joining together of more than one original holding) and the rationalisation of the field systems, allowing for the creation of bigger fields.

Population Changes

The evidence so far presented would point to greater settlement contraction and a process of dispersal across parts of the Culm Measures (HLCA 1) and in the area to the south of Bodmin Moor (HLCA 4) over the course of the late medieval and early post-medieval periods; more so than was the case across much of east Cornwall (HLCA 2). By the same token, Category 2 field systems, dominated by cropping units, exhibit evidence for loss of field boundaries post-enclosure, which would suggest that those parts of the local study area underwent some form of change following the period of enclosure, presumably as a result of social or economic changes. This section will approach the issue by looking at evidence for changes in population levels across the South West between the late 11th century and the late medieval period, whilst the next section will consider possible economic factors.

The starting point for this investigation were the population density maps compiled from Domesday Book information, which are presented in *The Domesday Geography of South West England* (Darby and Finn 1967). This is a particularly useful study of the South West for the late 11th century, providing data of settlement distribution and presenting population density maps. In addition, economic aspects such as incidence of plough teams and quantification of various types of other resources, such as woodland and meadow, were also presented. This section will concentrate on population density figures and what they might potentially tell us about settlement within the local study area. The individual studies were undertaken by Welldon Finn for Devon and by Ravenhill for Cornwall.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.9: Population densities per sq mile for Cornwall (top) and Devon (bottom), at the time of Domesday (Darby and Finn 1967; Fig. 72, 318 & Fig. 56, 248).

Population density maps for Cornwall and Devon are presented in Figure 10.9. In both cases, population densities are given in population numbers per sq mile, based on the recorded Domesday entries, presumed to be counts of heads of households rather than actual numbers (Darby and Finn 1967, 317). It was assumed by the authors that these figures would probably need multiplying by at least four or five times to reach an approximation of actual population numbers. Assuming consistency in recording and the collection of data across the region, however, this was not regarded as being critical for this study, as what is more important are relative differences in population across the local study area, not absolute numbers. A composite map of the two counties, with the local study area marked, is presented as Figure 10.10.

Overall numbers are relatively low, with much of the local study area at between 5 and 5.8 persons per sq mile. Therefore, for east Cornwall, most of the settled lowlands along the west side of the Tamar Valley are in the range of 5.2 to 5.8 persons per sq mile, with the lower figure relating to the northern part, corresponding with Stratton Hundred and the Culm Measures (Darby and Finn 1967, fig 72; 318). In those areas further west within the local study area, that is across Bodmin Moor and adjoining areas, population density is given as an average of between 4.0 and 4.9 persons per sq mile. Welldon Finn's equivalent map for Devon shows greater variation across the western part of the county. Within those areas of Devon corresponding with the local study area many of the border parishes were also in the range of 5.2 to 5.5 people per square mile, with, unsurprisingly, lower population densities of 3.1-3.2 on the western Dartmoor fringe and 3.4 across the moorland uplands of Broadbury Ridges (being only a part of the Culm Measures). Higher levels are found around Lifton, at 8.3 persons per sq mile, in an area bordering the east side of the River Tamar and once the centre of a royal manor (Hoskins 1954, 424). Perhaps more noticeable, however, are figures for the Culm Measures to the north of the Broadbury Ridges, at between 7.1 and 8.4 people per sq mile, giving the highest population density figures for the entire local study area at this time. This is an area which, by the late medieval period, seems to exhibit dispersed settlement patterns (with fewer farms overall than for Cornwall to the south-

west) and presumably lower population levels, pointing to a subsequent disproportionate fall than in other parts of the local study area.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.10: Composite map showing estimated population densities per sq mile for Cornwall and Devon at the time of Domesday (Darby and Finn 1967; Fig. 72, 318 & Fig. 56, 248), with the local study area outlined in red.

Moving northwards from the northern Devon parishes to beyond the local study area, towards the important port towns of Bideford and Barnstaple on the Torridge and Taw estuaries, population densities increase to between 8.5 and 9 persons per sq mile, though it could be that these figures are skewed by the populations of the towns themselves. It should be borne in mind that these are late 11th-century figures and relate to population levels at the beginning of the High Middle Ages. It might therefore be suggested that Devon parishes in the northern part of the local study area, such as Black Torrington, Highampton and Ashwater, economically looked northwards to Barnstaple and Bideford or to the east, towards Okehampton. It is also of note that this northern part of Devon (beyond the local study area), has very good evidence for former open field, Braunton Great Field being a case in point.

It is difficult to compare absolute population levels at the time of Domesday with those of the later medieval period, because the data are derived from different types of sources. For the later period, these figures may be provided by, for example, the lay subsidy of 1334 (prior to the Black Death), and that of 1524, as well as the poll tax returns, for example for 1377. Population figures for the two counties were analysed by Hatcher in *The Agrarian History of England and Wales* (Hatcher 1988) using the poll tax returns of 1377. Hatcher (1988, 245) drew the conclusion that by 1377 the population was a third more dense in Cornwall than in Devon, therefore the reverse of the situation at Domesday. Hatcher quotes Hallam's analysis of figures prepared by Russell (Hatcher 1988, 235) comparing population increase in Devon between 1086 and 1377. These suggested an increase by a factor of 1.26 times for Devon but 2.7 in Cornwall. Behind these figures, it would be assumed that there was an increase in population in the two and a half centuries after Domesday, with a fall in population in the 14th century, followed by a recovery in population levels after that date.

Comparing Domesday population statistics with settlement and field system evidence from the northern part of the local study area (HLCA 1), which is presumed to relate to the late medieval and early post-medieval periods, would seem to support the proposition of a decline in population over this period in this area. This is evidenced by a more dispersed settlement pattern and greater prevalence of cropping units over strip-based fields than is seen in east Cornwall. Although dispersal of settlement does not necessarily equate to a declining population, the total number of settlements (including large isolated farmsteads) is lower here than in the east Cornwall parishes of HLCA 2.

Diversification

The evidence so far presented in this chapter would point to higher population levels across the Culm Measures and around Lifton at Domesday than in other parts of the local study area. The settlement and field system evidence presented in Chapters 6-8 would also point to there once having been more

nucleated settlement here than in the 19th century. Open field would at various times seem to have been present across most of the local study area.

Hatcher made a point of drawing attention to the lack of correlation between population density and 'richness of the soil' in the South West in the 11th century, with an apparent 'curious readiness to settle and cultivate poor soils' (Hatcher 1988, 239). Areas of particular note were 'the cold Culm Measures of the central and north-western parts of the county', along with the relatively densely settled parts of north-east Cornwall. Such interpretations are in keeping with Darby and Finn's (1967) analysis of Domesday population figures discussed in the previous section. It must therefore be assumed that there was an incentive for the practice of arable or mixed farming across the Culm Measures in the 11th-13th centuries that then subsequently lessened. Turner (2006b, 82, 90) regarded commons, moors and heaths in the South West as having been colonised after the Conquest, following the expansion into woodland and downs in the late pre-Conquest period, with greater momentum in 12th and 13th centuries, and with the height of population in 14th century. Given the topography and clay soils, the climate must have been suitably benign and the demand sufficiently great enough, perhaps because of population pressure, to make cultivation economically viable for the investment required. This may also have been facilitated by better technology (for example, mould-board ploughs), and use of fertilisers, including sea sand, to improve soil fertility. For Tavistock Abbey, for example, there is reference in the Hurdwick accounts to 'dunging' (Finberg 1969a, 88). In the middle of the 13th century, a charter permitting the collection of sea sand for use as a fertiliser was granted to all the inhabitants of Cornwall, by Richard, earl of Cornwall, and it is also a recurring item in the Werrington accounts (Finberg 1969a, 89).

Conversely, any deterioration in climate, to colder and wetter conditions, with a consequent reduction in the growing season for arable crops, could quickly turn these 'marginal' areas (as far as staple crops such as wheat and barley are concerned) into uneconomic regions. Such a change in climate to colder, wetter conditions was seen at the end of the 13th and the beginning of the 14th centuries, leading to the well-documented famines of 1315-16 (Jordan 1996,

52-3; Prestwich 2005, 5-8). As we have seen, in terms of settlement in the South West, the most visible consequence of this was a retreat of settlement and of arable farming from more marginal areas such as parts of Bodmin Moor and Dartmoor, which also seems to have affected the Culm Measures.

In summary, this study has shown that there was a loss of some settlement from moorland locations within the local study area in the later Middle Ages. The settlement and field system evidence would also point to increasing dispersal of settlement and enclosure of former open field, to a greater extent across the Culm Measures (HLCA 1) and in south Cornwall (HLCA 4), than in east Cornwall (HLCA 2). The next section will look at the evidence for economic changes which might have brought about these differences.

Economic Change

Variability in settlement and field system patterns across the local study area in the late medieval period now require some explanation. Focussing first on the northern parishes of the local study area (HLCA 1), it can be seen that the area corresponds approximately with a part of the Culm Measures. As described in Chapter 8, this is mostly elevated ground characterised by slowly permeable clay soils, which are prone to waterlogging. It has already been suggested that a change to a colder, wetter climate at the end of the 13th century may have made arable farming less viable, with a reduction in growing season for many arable crops. A re-structuring of parts of the landscape of west Devon at this point in time might therefore be suggested, leading to increasingly dispersed settlement and enclosure of some former open field.

Joan Thirsk (1987, 28-9) has pointed to a trend for increasing economic specialisation in English regions from the late medieval period onwards, dividing early modern Devon into sheep-corn country (South Hams, Exe estuary, Taw/Torridge lowland), with areas of stock rearing and dairying elsewhere. Therefore, a range of arable crops was grown in the South Hams in the 14th and 15th centuries, dominated by oats, wheat and barley, with cattle and dairy farming increasing in importance across north and west Devon. The latter is

precisely those areas which are included in the Devon portion of the local study area. Ashwater, for example, in the north-eastern part of the local study area, supplied meat on the hoof to urban centres in 15th century (Fox 1991a, 128-9). Cornwall had a diversified economy in the 15th century, with mining, fishing, shipping, quarrying and ship building all being important, competing with agriculture but also providing a market for its produce, a contrast to many other regions of England (Hatcher 1970a, 29). East Cornwall and west Devon were also significant in terms of textiles in the 15th century, with exports going through Plymouth and the south coast Cornish ports (Hatcher 1970a, 167-70). Manorial records of Climsland in the later 14th and 15th centuries, for example, show construction of additional fulling mills (Fox 1991a, 171).

Fox (1991a, 153) refers to a long-term trend in the South West for conversion to livestock farming, particularly cattle, beginning even before the Black Death, leading to a contraction in the amount of land under arable. Looking at the period between 1295-1325 and 1497-1509, comparing extents of arable, pasture and moorland, Fox noted a general reduction in the acreage of land under arable. Fox's analysis is summarised in Table 10.5, showing the pattern to be variable across the region. It will be seen that the most marked change was in mid- and north Devon (therefore HLCA 1), where there was a reduction in land under arable from 71.1% to 50.9% over this period, mainly with an increase in moorland rough pasture (from 8.5% to 30.6%). This was in stark contrast to the Cornish coastlands, covering much of east Cornwall (including HLCA 2), where there was a more moderate reduction of arable from 57.3% to 54.8% over the same period. Fox saw this in terms of an abandonment of poor yielding lands which had been put over to arable in the 12th and 13th centuries as a result of population pressure, although the Domesday evidence would suggest that colonisation began much earlier. It has also been pointed out that livestock farming requires less human labour than does arable, which could lead to (or result from) a fall in population numbers. In the parish of Ashwater, therefore, four settlements were abandoned as a result of attachment of land to neighbouring settlements, and most hamlets dwindled in size (Fox 1991a, 167).

Table 10.5: Devon and Cornwall: change in land use by region, 1295-1509 (Fox 1991, Table 2.17, 152-174).

	Arable	**Meadow**	**Pasture**	**Moor**
South Devon				
1295-1325	66.8	4.1	19.3	9.8
1497-1509	62.7	6.8	15.5	15.0
East Devon				
1295-1325	64.6	9.8	10.3	15.3
1497-1509	61.4	6.5	4.4	27.7
Mid & North Devon				
1295-1325	71.1	4.4	16.0	8.5
1497-1509	50.9	7.4	11.1	30.6
Devon Moorlands				
1295-1325	62.5	5.4	6.3	25.8
1497-1509	56.3	7.5	8.7	27.5
Cornish Coastlands				
1295-1325	57.3	2.5	26.7	13.5
1497-1509	54.8	7.0	19.5	18.7
Cornish Moorlands				
1295-1325	56.4	4.4	22.9	16.3
1497-1509	16.1	3.1	28.7	52.1

As well as perhaps being more suited to pastoral farming, it could be that north-west Devon, and to a lesser extent north-east Cornwall, were drawn more into the orbit of cattle and sheep pasturing on Dartmoor, which has been described in detail by Fox (2012). In the later Middle Ages, there was an increasing industry of sending cattle up onto the moor in the summer months, with documented accounts of cattle movements to Dartmoor from as far away as north-east Cornwall (Fox 2012, 55-61). Other areas which were known for cattle pasturing include Broadbury Ridges, on the southern part of the Culm Measures, part of HLCA 1. Carew states that cattle from as far afield as Devon and Somerset were commonly pastured in ‘great droves’ on the moors of north-east Cornwall (Halliday 1969, 23). This also chimes with evidence that Tavistock Abbey was increasingly moving over to cattle / dairy farming, with greater opportunities offered by major urban markets such as Plymouth in the later Middle Ages. This may have reflected the wider economy of the moorland

edge parishes around Dartmoor, where there was a very well-developed pastoral economy, in part based on transhumance. The question of whether the pastoral economy of Dartmoor was relatively more important than that of Bodmin Moor is difficult to answer at this point in time, if only because Dartmoor has been studied in much greater detail (Fox 2012). This has provided details of links between lowland estates and upland pastures, that between Cudlipptown and Tavistock being one such example (Figure 10.11).

East Cornwall would evidently have been affected by many of the same conditions and influences as was west Devon, but this study has shown that there were significant variations in both settlement patterns and field systems across the different parts of the local study area. Although there was some settlement loss and contraction in east Cornwall from the late medieval period onwards, it does not seem to have been to the same extent as was seen across parts of the Culm Measures. A greater preponderance of strip-based fields in east Cornwall might point to later enclosure of open fields, and a greater degree of settlement nucleation, perhaps reflecting higher population levels in the later medieval and early post-medieval periods.

The presence of extensive rough grazing land on Bodmin Moor and upland areas of Cornwall might have encouraged a similar economy to that seen on Dartmoor, and indeed livestock farming must have remained an important part of the rural economy for this part of Cornwall. Settlement nucleation, and more settlement overall, however, suggests greater population numbers in the late medieval period in Cornwall. Hatcher (1988, 245) has pointed to a greater increase in population in Cornwall than in Devon, for example, between Domesday in 1086 and the poll tax returns of 1377. It could be that in east Cornwall there was an increased need for agriculture to provide for those working in other industries, often on a part-time basis, such as mining or quarrying. This could equally be said of west Devon and Dartmoor, however, with many of the same industries being important here as well, though the arrangement of the historic landscape would point to there having been a different response in the two adjacent areas and mining, in particular, might have been more important in Cornwall.

Tavistock Abbey's greater economic control of its estates is also of some interest, a greater extent of demesne farmland with perhaps tighter control over its estates leading to an early emphasis on cattle pasturing, which was then followed by landowners in other parts of north-west Devon, such as on the Culm Measures. Whatever the real extent of open field farming in Tavistock and adjoining parishes, enclosure and reorganisation of the landscape may have been largely complete by the early 14th century, as is suggested by the documentary evidence. It was suggested in Chapter 9 that individual holdings which were sublet in order to create knight's fees could follow different trajectories, with some sub-tenants maintaining nucleated settlement and open field, whilst others did not. A contrast may also be drawn with the Duchy of Cornwall, where demesne farming was almost totally absent.

This image has been removed by the author
of this thesis
for copyright reasons

Figure 10.11: Detached territories: Tavistock and Cudlipp. (from Fox 2012, Figure 4.8, 127).

Discussion

Having defined four distinct historic landscape character areas in Chapter 8, on the basis of relative settlement nucleation / dispersal and the quality of evidence for former open fields, Chapter 9 looked at traditional theories of explaining variation in the development of the historic landscape. These included aspects of the natural environment, such as topography and soils, and of human agency, such as the influence of lordship and of emulation. It was seen that whilst there was some merit in each of these explanations for interpreting the development of different parts of the local study area, none offered wholly encompassing explanations. This chapter has therefore sought to add time depth to the analysis, examining whether social and economic changes from the late medieval period onwards have had more of an effect on the formation of landscape character. In a linked trend, it was noted that population levels across the Culm Measures at the time of Domesday were higher than in adjoining areas of east Cornwall and south-west Devon. This was despite this region having poorer soils and higher rainfall than the lower-lying agricultural lands to the south. There is also documentary evidence to point to a greater switchover to cattle and dairy farming in west Devon from the late medieval period onwards, than was the case in east Cornwall.

It is suggested that more difficult to work soils in areas such as the Culm Measures, which were less suited to the growing of crops, had been brought into arable use from the late 1st millennium onwards in response to growing population pressure. Falling population levels from the mid-14th century onwards allowed for a contraction of land under arable by a move away from more marginal upland areas, with increasing opportunities for its replacement with livestock farming, perhaps following the lead of Tavistock Abbey, and taking advantage of the opportunities presented by proximity to summer pasture on Dartmoor. Pastoral farming is also less labour intensive than is arable, and its increasing importance in west Devon, and a consequent reduction in communal methods of farming, seems to be reflected in the more dispersed settlement patterns and prevalence of Category 2 field systems identified in this study.

At the same time, the more nucleated settlement pattern and Category 1 field systems in east Cornwall would suggest a higher population, certainly at the point of enclosure, than was seen in corresponding parts of west Devon. Fox has suggested that population levels may have been better maintained, perhaps because of greater opportunities presented by other industries, such as mining, with even a suggestion of in-migration from elsewhere in England helping to maintain population levels. Types of tenure operated by major landholders such as the Duchy of Cornwall, and the system of regular assessions may also have had an effect on the field patterns by creating a market in land.

11

Conclusion

The principal aim of this thesis has been to examine local and regional variation in the historic landscapes of South West England, in order to determine whether there were significant differences between Cornwall and Devon, or between different parts of the two counties, in the late medieval and early post-medieval periods. It was proposed to achieve this through two principal objectives: a survey of late medieval and early post-medieval settlement patterns and relative settlement nucleation/dispersal on the one hand; and a reconstruction of the former distribution of open field on the other. Together, these two themes were seen as the major components of the rural landscape, reflecting how the countrysides of Cornwall and Devon were in the past organised and managed, and perhaps even displaying more deep-rooted social or cultural differences between the Cornish and the Devonians. Nucleated settlement and open field reflect communal ways of farming and together were present across much of England in the Middle Ages. The picture for the South West, however, has been of an overall dispersed settlement pattern and a general absence of the type of classic two- and three-field open field systems typical of the English Midlands. Any variation identified across the South West region, therefore, would necessarily be more subtle in character.

Landscape character may be determined by a complex set of interrelationships between a range of different influences, both human and environmental, the balance of which may vary through time. The siting, size and form of settlements, and how communities farm their land, are the consequence of decisions made by real people and over long periods of time. Decisions will have been informed, if not determined, by the constraints of the natural environment, but social and political considerations, whether that be population

pressure, local communities or the dictates of local or regional lords, may also be significant. The relative balance between environmental factors and human agency in determining the historic landscape was therefore a key aim of this thesis.

In order to undertake this analysis a study area was required that would include parts of both Cornwall and Devon. The border between the two counties is largely formed by the River Tamar, and this formed the axis of the local study area. The later role of the Tamar as a political, social or cultural boundary should not be taken as a given, however, and its function undoubtedly changed through time. As has been seen, in more modern times the river connected communities to either side, providing a means of transporting ore and agricultural produce from east Cornwall and west Devon, down to Plymouth and beyond. The river would seem to have been less of a boundary in its upper reaches to the north, however, and in consequence there may have been greater unity in how the historic landscape was in the past organised across this part of the South West.

The local study area which was chosen covered adjoining parts of east Cornwall and west Devon, and included a range of landscapes, geology and soil types which essentially mirrored one another to either side of the river. The underlying physical landscape was then overlain by the network of ecclesiastical parishes, to provide a political framework with which to assess settlement and field system distributions. Ecclesiastical parishes were chosen as representing early political structures at the local level, and they could then be directly related to how the landscape was historically organised and managed across east Cornwall and west Devon. Analysis of both settlement patterns and field systems, however, was initially undertaken using 19th-century cartographic sources and it should be reiterated that this study was therefore an examination of the 19th-century landscape, upon which inferences could then be made about the later medieval and early post-medieval landscapes. To the 19th-century map evidence, a whole range of other sources were therefore also brought to bear, from earlier 19th-century tithe maps, documentary sources, aerial photographs and LiDAR data, as well as the results of excavation and

earthwork surveys. Together, these were used to attempt a partial reconstruction of the medieval and early post-medieval landscapes. These types of evidence were by their nature, however, fragmentary, and could only be used as pointers to, for example, the presence and extent of open field in the region in the late medieval period. Absence of evidence in some cases, however, could not be used to definitively show that open field had never been present in, for example, the south-west Devon parishes, which illustrates the potential limitations of the types of evidence employed.

Settlement Nucleation

The South West is and has historically been, a largely rural part of England, and it is with the rural landscape that this study has therefore been most concerned. When viewed from a national perspective, settlement in the South West is often described as being generally dispersed, and any variation identified across the local study area would therefore be relatively subtle. Within these constraints, once medieval settlement morphology and their distribution had been analysed, the results pointed to noticeably greater settlement nucleation in east Cornwall than was the case in most of the Devon portion of the local study area, though with moderately raised levels in some of the northern Devon parishes. These are differences of degree within a broader area characterised by overall settlement dispersal, and that there was not a simple dichotomy between Cornwall and Devon suggested more complicated histories of formation.

In attempting a reconstruction of the late medieval and early post-medieval landscapes, the long-held assumptions of shrinkage, desertion and dispersal of rural settlement in the South West, suggested by a variety of documentary sources, was confirmed using a range of sources and techniques. These included an assessment of the archaeological and survey evidence, and by an in-depth study of settlement morphology as represented on the later OS maps. It is acknowledged that the approach taken was in large part interpretative, based on the morphology of settlements recorded on 19th-century maps, but it is backed up by other tranches of evidence, including other historic maps, archaeology and aerial photographic sources. It is these trends which underpin the rationale of Chapter 6, and is assumed to be at least in part linked with the

substantial falls in population seen across England in the 14th century, as a result of famine and of the Black Death, if not directly then as a result of economic change or dislocation. In the South West, the evidence would point to some actual loss of settlement, though not on the scale of the deserted medieval villages that are seen across much of central and eastern England, with, more significantly, a trend for the dispersal and shrinkage of many settlements. The process is, therefore, not necessarily purely a function of population size but could, in part, have been related to a reorganisation due to changing economic circumstances and also by the movement of a proportion of the rural population to the cities.

Whilst overall, the results seemed to indicate that rural settlement nucleation had been higher in the late Middle Ages and in the early post-medieval period than in the 19th century across both Cornwall and Devon, patterns were uneven across the area and changed over time. In particular, a process of greater dispersal of settlement would seem to be indicated across the Culm Measures and also in Cornwall to the south of Bodmin Moor in the late medieval and early post-medieval periods than was seen elsewhere in the local study area.

The Extent of Former Open Field

Open fields point to communal methods of farming and a greater degree of cooperation in how the rural landscape was organised and managed, and identification of their former extent across the local study area was therefore the second objective of this study. Finberg, in particular, identified documentary sources referring to common fields and also pointed to the presence of former open field in the South West, fossilised in field boundary patterns created at the point of enclosure and represented on 19th-century maps. Also using 19th-century maps, this study identified a range of field types which were thought likely, based on their plan morphology, to derive from former open field. In particular, these comprised strip-based fields, narrow curving fields thought to derive from the amalgamation of a small number of strips at enclosure, and cropping units, possibly bundles of many more strips. In addition, some larger fields, which were termed semi-regular fields, were also thought in some cases to have been derived from enclosure of former open field.

In plotting their distribution across the local study area, it was found that strip-based fields (Category 1 field systems) were most densely concentrated in the east Cornwall parishes of the local study area, whilst cropping units (Category 2 field systems) were relatively more common across the northern part of the local study area, corresponding approximately with a part of the Culm Measures, as well as in a group of parishes around Liskeard, on the south side of Bodmin Moor. The question to be asked is, if both types of field derive from former open field, why are they different in terms of morphology and why do they follow different distribution patterns? It was also found that morphological evidence for open field was largely absent from south-west Devon to the south of the River Thrushel, though with a limited number of very good examples associated with particular large-sized hamlets. This seemed to contradict documentary evidence presented by Finberg that open field had indeed once been present in this part of south-west Devon. Further work on the loss of field boundaries over time reinforced the proposition that both Category 1 and 2 field systems were likely to have been derived from former open field. It was suggested that the different morphologies of strip-based fields and cropping units may have resulted from differential patterns or timing of enclosure, or from later reorganisation of the landscape, perhaps post-enclosure in those parts of the local study area where they predominate.

Finberg's evidence also suggests that a straightforward morphological analysis of fields as represented on 19th-century maps cannot provide the whole picture. His presentation of documentary evidence for open field in the parishes around Tavistock Abbey is not directly supported here by the evidence for strip-based fields and cropping units, the absence of evidence being something which was acknowledged by Finberg himself. It would therefore seem that some semi-regular fields should also be taken as evidence that open field had indeed been present in this part of the local study area as well. If so, then something has happened to the landscape of the south-west Devon parishes to result in a substantially different pattern of fields.

Settlements and their fields

Having examined the two major components of this study separately – settlement nucleation and the distribution of former open field – it became clear that different parts of the local study area were beginning to show distinctive characteristics that could be used to define historic landscape character areas. The four such areas which were subsequently defined, it should be reiterated, were created within the framework of ecclesiastical parishes. The rationale behind this was to allow for comparisons between political and social organisations on the one hand and the underlying physical landscape on the other, as had been undertaken with settlements and field systems separately. An anomaly which arises when taking this approach, however, is that the high moorland areas of Bodmin Moor and Dartmoor are effectively subsumed within some parishes which also have lowland areas. The core of this study is actually looking at what is termed in the Cornwall HLC as 'Anciently Enclosed Land', that is, the main areas of medieval and early post-medieval farmland. Exploitation of moorland areas was mainly peripheral to this activity or, at best, temporary, where farming settlements such as Brown Willy and Hound Tor are concerned. There was a relative lack of most classes of settlement and field systems of interest to this study on the moors and the large size of many moorland parishes, with concentrations of settlement in the lowland / valley parts of many of those parishes, meant that they could still be compared with their lowland counterparts.

Environmental Determinism Versus Human Agency

The close correspondence between the elevated landscape of the western Culm Measures and HLCA 1 provides some evidence of a close link between environmental factors and human responses to those constraints. This is particularly the case when one considers that parts of both Cornwall and Devon are included, with little sign that the River Tamar formed a dividing line, either in terms of the physical landscape or settlement and field system patterns. It is here that settlement is seen as having been moderately dispersed, with a relative prevalence of cropping units. That said, it should be noted that there may have been closer social ties between north-east Cornwall to the north of the River Ottery and adjoining parts of west Devon. The River Tamar at this

point does not provide the kind of obstacle to East–West movement that is the case further south, and the prevalence of Old English place-name forms in north-east Cornwall has long suggested closer links with west Devon than with the remainder of Cornwall.

Aside from Bodmin Moor and Dartmoor, no such clear associations between settlement and field system patterns and the physical environment is apparent to the south of the Rivers Ottery and Thrushel, and alternative explanations for the differences seen between the remaining parts of the local study area must therefore be sought. Human decision making can be influenced by a variety of factors other than simply the constraints of the environment, whether direction comes from above (lordship) or from within communities themselves. The concentration of nucleated settlement and Category 1 field systems in east Cornwall in the late medieval and early post-medieval periods, for example, is one of the main findings of this thesis. Many of the estates in this part of the local study area were held by the Duchy of Cornwall, though even here there was some variability in the settlement and field system patterns observed. The parish of Stoke Climsland (manor of Climsland) was marked by dispersed settlement patterns and lack of evidence for strip-based fields, whilst Calstock and also Linkinhorne (manor of Rillaton), along with other adjacent non-Duchy manors, all exhibited high settlement nucleation along with good evidence for former open field. Hatcher (1970a, 37) made a point of stating that the Duchy did not farm its own demesne lands after 1337, which could also suggest a *laissez faire* attitude to how the estates were run. There is therefore likely to be some other reason for the presence of strip-based fields in such numbers across east Cornwall, whether that be economic, social, or simply communities adopting through time the practices of their neighbours. The use of conventionary tenure and of regular assessions by the Duchy of Cornwall seems to have created what was effectively a free market for land, with potential tenants periodically bidding for holdings, and similar approaches were taken by other major landholders in Cornwall. The system could have influenced and determined tenancy arrangements and farming methods right across Cornwall in the later Middle Ages, leading to the preservation of many more, smaller holdings.

Finberg's (1951; 1969a) seminal study of the estates of Tavistock Abbey provides important economic and administrative information on those parishes occupying the south-west Devon portion of the local study area, as well as the two Cornish parishes of Stoke Climsland and Werrington. The dominant pattern seen in this study with all of these parishes was of relatively low settlement nucleation, and morphological evidence for open field having been largely absent, although the extent to which this is a function of differential survival of evidence will be addressed below. Abbey records from as early as the late 11th century pointed to the importance of sheep rearing, particularly on its Hurdwick and Werrington estates, as well as direct hands-on control of its extensive demesne land lying to the north of the town of Tavistock. Later documentary sources also point to the increasing importance of cattle and dairy farming to the abbey in the later Middle Ages, which was perhaps more easily facilitated by the direct control that the abbey was able to exert over its demesne lands. Arable farming may have been, or become, less important in this part of Devon than in surrounding areas, with fewer open field systems having been present. Some settlements within this area which are associated with former open field may be linked with sub-tenants holding knights' fees, their proprietors taking a different, or even less hands-on, approach to the management of their estates. This is not to say that open field had not once been widespread in this part of the local study area, only that the morphological evidence is less convincing.

Towards an Explanation of Landscape Variation

It is now appropriate to review the various explanations for variation in the historic landscapes of the South West and to take a more time-sensitive approach to the analysis. Reviewing evidence for former open field across east Cornwall and west Devon, it is suggested that they had once been fairly ubiquitous. This seems to have been the case even in so-called marginal areas, such as the Culm Measures. Population growth during the 11th, 12th and 13th centuries, for example, would seem to have driven the expansion of land brought under arable, with new settlement being established on what previously

had been upland waste, used principally for grazing. This was so not only on parts of Bodmin Moor and Dartmoor, with the establishment of new farming hamlets such as Brown Willy and Hound Tor, but also in lower lying areas of poorer soils, which later reverted to heathland, such as along the north Cornwall coastal fringe. This is why the Culm Measures presents a particularly interesting case in point. This is a relatively high plateau region with higher rainfall than surrounding areas, clayey, more difficult to work soils, and a shorter growing season for arable crops. Analysis of Domesday Book (Darby and Finn 1967), however, would suggest that, despite these drawbacks, population levels were higher on the Culm Measures in the 11th century than in the more fertile lowlands to the south, in both east Cornwall and west Devon. During the High Middle Ages, a mild climate, pressure of population and proximity to various urban centres, such as Barnstaple, Bideford and Okehampton, made arable or mixed farming a viable option. There would have been an economic incentive to invest in such practices and this will have been facilitated by improved technology, for example mould-board ploughs, fertiliser and soil modifiers such as sea sand.

The combined effects of a deteriorating climate, famine and plague saw quite substantial falls in population levels during the course of the 14th century. Within the local study area, these factors are clearly manifested not only in the desertion of some settlement in moorland fringe locations, but in the pattern of settlement shrinkage and dispersal seen across the whole area. It has been shown, however, that this process was not evenly distributed. Settlement shrinkage, for example, seems to have affected the east Cornwall parishes less than those parishes in the remainder of the area under investigation. Therefore, across much of the local study area it was found that between 50% and 60% of small-sized hamlets had, by the 19th century, shrunk to large isolated farmsteads, whilst the figure for the east Cornwall parishes of HLCA 2, was much lower, at 25%. When one turns to the distribution of open field, the greater preponderance of cropping units across the northern part of the local study area (HLCA 1), suggests a greater reorganisation of the landscape in the late medieval or early post-medieval periods. It is suggested that enclosure took place earlier across the Culm Measures, followed by a decline in the number of

tenants and by the loss of field boundaries. This proposition is supported by documentary evidence which points to a change in the rural economy of north-west Devon between 1295 and 1509 (Fox 1991, 152-74), with conversion of much of the land over to pasture, with cattle and dairy farming becoming increasingly important here in the later Middle Ages. This may perhaps have been helped by the well-organised system of summer pasturing on Dartmoor, and may have followed an earlier period of reorganisation and enclosure in those south-west Devon parishes controlled or influenced by Tavistock Abbey.

For the Culm Measures, the reasons for this change may be readily apparent. The elevated terrain, higher rainfall when compared with the lowlands to the south, and poorly draining soils make this a poor area for the growing of arable crops. A climatic deterioration which onset around the turn of the 14th century may have reduced the length of the growing season for many crops, with seasonal waterlogging making the clayey soils harder to work, making the area less economically viable in terms of arable. This was followed by a population crash in the middle decades of the 14th century which would have reduced the need for large-scale arable farming across north-west Devon and allowed for the conversion of much of this land over to pasture. Joan Thirsk has pointed to the trend for increasing regional agricultural specialisation from the latter half of the 14th century, and cattle and dairying do seem to have become more dominant in west Devon from this period onwards. This was also facilitated by the increasingly well organised pasturing of cattle on Dartmoor during the summer months.

Similar patterns of moderately dispersed settlement and a presence of cropping units is seen in HLCA 4, on the southern side of Bodmin Moor and into the lowlands of south-east Cornwall. If anything, there are higher numbers of linked farmsteads particularly on the edge of the moor itself, and proportionately more small-sized hamlets in this area. The steep slopes of the Fowey Valley were and still are well-wooded, but much of the rolling agricultural landscapes through the parishes of Liskeard, Menheniot and St Ive, is little different to that seen to the north and east of the River Lynher (HLCA 2).

If a chronological approach is taken to explain the formation of the historic landscape, then we should perhaps start with those south-west Devon parishes under the auspices of Tavistock Abbey. Analysis of field patterns represented on 19th-century maps provides limited evidence for open field ever being present in the south-western part of Devon, with some interesting exceptions, such as around Liddinton and Chaddlehanger. It may be that open field farming was never a major component of the rural landscape in lands controlled by Tavistock Abbey – and this might also have applied to certain Cornish parishes such as Werrington and Stoke Climsland. The key, however, may lie in Finberg's documentary evidence for former open field only being relevant in the period up to the early 14th century, with his suggestion of early enclosure of these lands in the decades either side of 1300. Tavistock Abbey's suggested greater control of extensive demesne land may therefore have resulted in most evidence for former open field being largely erased, providing a warning against putting quite so much emphasis on interpretations which rely too heavily on field morphology.

The block of east Cornwall parishes which together form HLCA 2 seem to have followed a different trajectory. It would seem that population levels remained higher into the post-medieval period here, with higher settlement nucleation remaining, and complex field systems pointing to a more fragmented process of enclosure which may have taken place later than in other parts of the local study area. Fox, for example, provided statistics to show that the late medieval population of Cornwall increased at a faster rate than in neighbouring Devon, perhaps with in-migration from England, surmising that itinerant workers were drawn by opportunities offered by employment in tin streaming and other industries. This would also have increased the demand for arable produce and may have been facilitated by the greater opportunities offered by conventionary tenure and the system of regular assessions, constantly providing opportunities for new tenants to enter the market.

Landscape Character and Social Identity

At the beginning of this thesis it was put forward that the principal aim was to establish whether there were differences in the historic landscapes of Cornwall

and Devon. It must be kept in mind, however, that this thesis is essentially a study of patterning in the 19th-century landscape, from which inferences have been made of the earlier, late medieval and early post-medieval landscapes; it is not by itself a characterisation of the medieval countryside and loss of much of the physical evidence means that it can only ever be a partial reconstruction. Behind this also lay an interest in whether the morphology of historic landscapes can in any way reflect the cultural groups who created them. In summary, it can be shown that variation in landscape character was indeed identified across east Cornwall and west Devon, and in the central part differences were identified between landscapes to either side of the River Tamar. This was not, however, a simple dichotomy between Cornwall and Devon, and certainly not a marker for cultural identity.

Indeed, a more nuanced picture has actually been revealed, with evolution of the landscape over time being a more important factor, with diverging economies between east Cornwall and west Devon. It has been shown that communal methods of farming were present across much of east Cornwall and west Devon in the High Middle Ages. The patterns of settlement and of open field examined in this thesis would indeed seem to show that there were many similarities in the landscapes either side of the Tamar in the High Middle Ages, particularly the prevalence of open field, although this may only have been at a time of maximum population and a benign climate. This would seem to have been at a sufficient level in north-west Devon to have supported a higher population at the time of Domesday than areas of better soils to the south, and in adjoining parts of east Cornwall. In south-west Devon, it is proposed, Tavistock Abbey seems to have exerted greater control over its demesne lands and estates than was the case with other landlords in the South West, and if open field had been a feature of this part of the local study area, the majority would appear to have been enclosed by the beginning of the 14th century.

In the later medieval and early post-medieval periods, however, more pronounced differences in the landscape would seem to have arisen between the remaining parts of the local study area, in particular, increasing specialisation towards cattle rearing and dairying across much of west Devon.

This may reflect a period of divergence between Cornwall and Devon along the lines of the model suggested by Deacon described in Chapter 1. The Devon half of the local study area would then seem to have gone through a process of greater settlement dispersal and perhaps earlier (or at least more comprehensive) enclosure of former open field. Tavistock Abbey increased the acreage given over to pasture, and in the north, across the Culm Measures, the evidence from this study points to early enclosure and an increasing conversion of land over to livestock farming. This was against a backdrop of greater organisation and commercialisation of livestock on Dartmoor (Fox 2012).

A different pattern can be seen with much of east Cornwall, and it is suggested that the greater preponderance of nucleated settlement and of strip-based fields may point to a higher population in the later Middle Ages, a continuance of arable or mixed farming regimes and, with the practice of conventionary tenure, a land market that encouraged competition. Other landholders may have adopted the same or similar patterns of tenure, but the influence of the Duchy of Cornwall in this area would seem to have been the most dominant factor. In summary, from the later medieval period onwards, parts of east Cornwall and west Devon would seem to have followed different trajectories, with the maintenance of arable and mixed farming in the former, and an increasing trend for livestock farming in the latter.

Bernard Deacon has also proposed that differences within Cornwall itself are often underplayed, particularly between west Cornwall and its mining traditions, and the more agriculturally oriented east of the county. Hatcher (1970a, 167) also points to the contrast in rent levels received from its manors in east and west Cornwall in the 15th century, with those in the east generally higher. It is with this in mind that the results of this thesis should be assessed. The local study area, it will be remembered, covers only a portion of the land mass of the South West Peninsula, and within this restricted area variations were observed in the historic landscape, both within and between Cornwall and Devon. Widen the area of study, taking in the agriculturally poorer parts of west Cornwall, the rich lowlands of the South Hams or of east Devon, and the picture is likely to have been even more complex. No simple Cornwall / Devon divide, and

especially one that can be attributed to Celtic or English culture, is therefore overwhelmingly apparent.

As a final word, however, it should be acknowledged that the Duchy of Cornwall is and was a peculiarly Cornish institution, and its territorial arrangements do seem to have been a major factor in determining landscape character in east Cornwall. Similarly, the control exercised by Tavistock Abbey over parts of west Devon does seem to drive economic specialisation east of the Tamar. If a real difference between east Cornwall and west Devon is to be sought, therefore, perhaps these two institutions should be seen as proxies for the two counties.

Bibliography

Aalen, F. H. A., 1997, 'The Irish rural landscape: synthesis of habitat and history, in F. H. A. Aalen, K. Whelan and M. Stout (eds.), *Atlas of the Irish Rural Landscape*, Cork, 4-30.

Allan, J. 1994,'Medieval pottery and the dating of deserted settlements on Dartmoor'*, Devon Archaeological Society Proceedings* 52, 141-8.

Andrew, C.K.C. 1942, *Davidstow Moor Excavations, 20th October, 1941 to 27th June 1942,* unpublished typescript.

Astill, G. and Davies, W. 1977, A Breton Landscape, PA, London/Bristol.

Aston, M. 1983, 'Deserted farmsteads on Exmoor and the Lay Subsidy of 1327 in west Somerset', *Somerset Archaeology and Natural History*, 71-104.

Aston, M. 1985, *Interpreting the Landscape: Landscape Archaeology in Local Studies*, Batsford, London.

Aston, M. 2000, *Monasteries in the Landscape,* Tempus, Stroud.

Aston, M. and Gerrard, C. 1999, ' "Unique, traditional and charming": the Shapwick Project, Somerset', *Antiquity Journal 79*: 1-58.

Aston, M. and Lewis, C. (eds.), 1994, *The Medieval Landscape of Wessex,* Oxbow, Oxford.

Aston, M. and Rowley, T. 1974, *Landscape Archaeology: An Introduction to Fieldwork Techniques on Post-Roman Landscapes*, David and Charles, Newton Abbot.

Austin, D. 1978, 'Excavations in Okehampton Park, Devon, 1976-78', Proceedings of the Devon Archaeological Society 36, 191-240.

Austin, D. 1985a, 'Doubts about morphogenesis', *Journal of Historical Geography* 11(ii), 201-9.

Austin, D. 1985b, 'Dartmoor and the Upland Village of the South West of England', in D. Hooke (ed) *Medieval Villages*, O.U.C.A Monograph No.5, Oxford.

Austin, D., Daggett, R.H. and Walker M.J.C., 1980, 'Farms and Fields in Okehampton Park, Devon: the problems of studying medieval landscape'. *Landscape History*, 2, 39-57.

Austin, D., Gerrard, G.A.M., and Greaves, T.A.P., 1989, 'Tin and agriculture on medieval and early Bodmin Moor; landscape archaeology in St Neot parish, Cornwall', *Cornish Archaeology 28, 5-251*.

Avery, B.M., Findlay, D.C. and Mackney, D. 1975, *Soil Map of England and Wales*, Soil Survey of England and Wales, Southampton.

Baker, A. R. H. and Butlin, R. A. 1973, 'Conclusions: problems and perspectives', in A. H. R. Baker and R. A. Butlin (eds.) *Studies of Field Systems in the British Isles*, Cambridge University Press, Cambridge.

Balchin, W.G.V. 1954, *Cornwall: An Illustrated Essay on the History of the Landscape*, Hodder and Stoughton, London.

Baring-Gould, Rev. S 1891, 'An ancient settlement at Trewortha Marsh', *Journal Royal Institution Cornwall ,*II, 57-70.

Baring-Gould, Rev. S 1892, 'Ancient settlement at Trewortha', *Journal Royal Institution Cornwall ,*II, 289-290.

Bassett, S. R. (ed.) 1989, *The Origins of Anglo-Saxon Kingdoms*, Leicester University Press, Leicester.

Bassett, S. R. 1989, 'In search of the origins of the Anglo-Saxon kingdoms', in S. Bassett (ed.), *The Origins of the Anglo-Saxon Kingdoms*, 3-27, Leicester University Press, Leicester.

Beacham, P. 1980 'Local building traditions in Devon from the Medieval Period to 1700', in S. Timms (ed) *Archaeology of the Devon Landscape*, Devon County Council, Exeter.

Beresford, G. 1971, 'Tresmorn, St Gennys', *Cornish Archaeology* 10, 53-73.

Beresford, G. 1979, 'Three Deserted Medieval Settlements on Dartmoor: A Report on the Late E. Marie Minter's Excavations', *Medieval Archaeology* 23, 98-158.

Beresford, M.W. 1957, *History on the Ground*, Lutterworth Press, London.

Beresford, M.W. 1964, 'Dispersed and grouped settlement in medieval Cornwall'. *Agricultural History Review* 12(1), 13-27.

Beresford, M.W. and Finberg, H.P.R. 1973, *English Medieval Boroughs: A Handlist*, David and Charles, Newton Abbot.

Beresford, M.W. and Hurst, J.G. 1971, *Deserted Medieval Villages*, Lutterworth Press, London

Beresford, M.W. and Hurst, J. 1990, *English Heritage Book of Wharram Percy:Deserted Medieaval Village,* English Heritage/Batsford, London.

Beresford, M.W. and St Joseph, J.K.S. 1958, *Medieval England: An Aerial Survey*, Cambridge University Press, Cambridge.

Beresford-Ellis, P. 1974, The Cornish Language and its Literature, Routledge and Kegan Paul, London.

Beresford-Ellis, P. 1999, *Celtic Myths and Legends,* Robinson, London.

Bishop, T.A.M. 1935, 'Assarting and the growth of the open fields', *Economic History Review* 6: 26-40.

Blair, J. 1991, *Early Medieval Surrey*, Alan Sutton, Stroud.

Blair, J. 2005, *The Church in Anglo-Saxon Society*, Oxford University Press, Oxford.

Blight J T, 'Notice of enclosures at Smallcombe, Cornwall', *Journal of the Royal Institution of Cornwall*, III 1868, 10.

Bloemers, J.H.F. 2002, 'Past- and future oriented archaeology: protecting and developing the archaeological-historical landscape in the Netherlands', in G. Fairclough and S. Rippon (eds.) *Europe's Cultural Landscape: Archaeologists and the Management of Change*, Europae Archaeoliae Consilium, 89-96, Brussels.

Bonney, D. 1979, 'Early Boundaries and Estates in Southern England', in P. H. Sawyer (ed.) *English Medieval Settlement*, 41-51, Hodder Arnold, London.

Borlase, W. 1754, *The Antiquities of Cornwall,* printed by W. Bowyer and J Nichols, for S. Baker & G. Leigh, T. Payne, B. White, London.

Borlase, W. 1758, *Natural History of Cornwall,* W. Jackson, Oxford.

Bowden, M. 2005, *The Malvern Hills: An Ancient Landscape*, English Heritage, London.

Bowen, H.C., 1970, *Ancient Fields: A Tentative Analysis of Vanishing Earthworks*, British Association for the Advancement of Science, London.

Brisbane, M. and Clews, S. 1979, 'The East Moor Field Systems, Altarnun and North Hill, Bodmin Moor', *Cornish Archaeology* 18, 33-56.

British Geological Survey, 2014 (http://mapapps.bgs.ac.uk/geologyofbritain/home.html)

Broad, J. 1980, 'Alternate husbandry and permanent pasture in the Midlands, 1650-1800', *The Agricultural History Review*, Vol 28, No 2, 77-89.

Brown, I. 2004, *Discovering a Welsh Landscape: Archaeology and the Clwydian Hills*, Windgather Press, Macclesfield.

Brown, T. and Foard, G. 1998, 'The Saxon Landscape: a regional perspective', in P. Everson and T. Williamson (ed.) (1998, 67-94).

Brown, N., Knopp, D. and Strachan, D. 2002 'The archaeology of Constable Country: the crop marks of the Stour Valley', *Landscape History* 24, 5-28.

Brown, T. and Foard, G. 2004 'The Anglo-Saxon period', in M. E. Tingle (ed) *The Archaeology of Northamptonshire*, Northampton 78-101.

Bruce-Mitford, R.L.S. 1956, 'A Dark Age Settlement at Mawgan Porth, Cornwall', in R.L.S. Bruce-Mitford (ed), *Recent Archaeological Excavations in Britain*, 167-196, Routledge and Kegan Paul, London.

Bruce-Mitford, R. 1997, *Mawgan Porth: A Settlement of the Late Saxon Period on the North Cornish Coast, Excavations 1949-52, 1954 and 1974,* English Heritage Archaeology Report 13, London.

Bull, E. 1999, *Cornwall's Field Boundaries*, Cornwall Archaeological Unit, Truro.

Campbell, B. M. S. 1981, 'Commonfield origins - the regional dimension', in T. Rowley (ed.) 1981, 112-29.

Campbell, B. M. S. 2000, *English Seigniorial Agriculture 1250-1450,* Cambridge University Press, Cambridge.

Cameron, K. 1996, *English Place-Names*, Batsford, London.

Halliday, F.E., (ed.) 1969, *The Survey of Cornwall*, (Richard Carew 1602,), Augustus M Kelley, New York 1969.

Cessford, C. 2004, 'The Origins and early development of Chesterton', *Proceedings of the Cambridge Antiquarian Society* 93 125-42.

Cessford, C. 2005, 'The manor of Hintona: the origins and development of Church End, Cherry Hinton', *Proceedings of the Cambridge Antiquarian Society 94* 51-72.

Chandler, J. 1993, *John Leland's Itinerary: Travels in Tudor England,* Alan Sutton, Stroud.

Cherry, B. and Pevsner, N. 1989, *The Buildings of England: Devon*. Penguin, London.

Chesher, V.M. and Chesher, F.J. 1968. *The Cornishman's House*, Bradford Barton, Truro.

Cornwall County Council 1996, *Cornwall Landscape Assessment*, unpublished report, by Cornwall Archaeological Unit and Landscape Design Associates.

Costen, M. 1992, *The Origins of Somerset*, Manchester University Press, Manchester.

Crawford, O. G. S. and Keiller, A. 1928, Wessex from the Air, Clarendon Press, Oxford.

Croft, R. and Mynard, D. C. 1993, *The Changing Landscape of Milton Keynes*, Buckinghamshire Archaeological Society Monograph 5, Aylesbury.

Currie, C. 2003,'Dartington Hall and Shilston Barton: archaeological excavations at two Devon gardens, 1991-2000' in R. Wilson-North (ed.), *The Lie of the Land: Aspects of the Archaeology and History of the Designed Landscape in the South West of England*, 51-65, Mint Press, Exeter.

Darby, H. C. 1952, *The Domesday Geography of Eastern England*. Cambridge University Press, Cambridge.

Darby, H. C. 1977, *Domesday England*, Cambridge University Press, Cambridge.

Darby, H. C. and Finn, R. 1967, *The Domesday Geography of South-West England*. Cambridge University Press, Cambridge.

Davies, E. 1984, 'Hafod and Lluest, the summering of cattle and upland settlement in Wales', *Folk Life*, 23, 76-96.

Davies, W. 1978, *An Early Welsh Microosm: Studies in the Llandaff Charters*, Royal Historical Society, London.

Davies, W. 1982, Wales in the Early Middle Ages, University of Leicester Press, Leicester

Deacon, B. 2007, *Cornwall: A Concise History*, University of Wales Press, Cardiff.

Deane, R. 2011, *An Archaeological Gradiometer Survey: Land at Hardstone Farm, Dunterton, Devon*, unpublished Substrata report.

Deane, T. and Shaw, T. 2003, *Folklore of Cornwall*, Tempus, Stroud.

Defoe, D. 1762, *A Tour Thro' the Whole Island of Great Britain, Divided into Circuits or Journeys Giving a Particular and Entertaining Account of Whatever is Curious, and Worth Observation*, in four volumes, Sixth edition.

Dixon, P. 2007, 'Conservation not reconstruction: Historic Land-Use Assessment (HLA), or characterising the historic landscape of Scotland', *Landscapes* 8:2, 72-83.

Dodgshon, J. M. 1966, 'The significance of the distribution of English place-names in *–ingas*, *-inga* in South-east England', *Medieval Archaeology* 10, 1-29.

Dodgshon, R. A. 1980, *The Origins of British Field Systems: An Interpretation*, Academic Press, London.

Dodgshon, R.A. and Jewell, C.A. 1970, 'Paring and burning and related practices with particular reference to the south-western counties of England', in A. Gailey and A. Fenton (eds.), *The Spade in Northern and Atlantic Europe*, 74-87, Ulster Folk Museum, Belfast.

Draper, S. 2006, *Landscape, Settlement and Society in Roman and Early Medieval Wiltshire.* Oxford: British Archaeological Reports, British Series 419, Oxford.

Dudley, D. 1955-6, 'Recent work in Cornish archaeology', *Proceedings of the West Cornwall Field Club*, 1(4), 147-52.

Dudley, D. and Minter, E. M. 1962-3,'The Medieval Village at Garrow Tor, Bodmin Moor, Cornwall', *Medieval Archaeology* 6-7, 272-94.

Dudley, D. and Minter, E. M. 1966, 'The excavation of a medieval settlement at Treworld, Lesnewth', *Cornish Archaeology* 5, 34-58.

Dudley, P. 2003, *Forrabury Strips, Forrabury and Minster, Cornwall, An Archaeological Assessment,* Cornwall County Council, Truro.

Dudley, P. 2011, *Goon, hal, cliff and croft, west Cornwall's rough ground*, Cornwall Council, Truro.

Dyer, C. 1982, 'Deserted medieval villages in the West Midlands', *Economic History Review* 2nd series 35, 19-34.

Dyer, C. 1985, 'Power and conflict in the medieval village', in D Hooke (ed.), *Medieval Villages*, 27-32, Oxford University Committee for Archaeology, Oxford.

Dyer, C. 1989, '"The Retreat from Marginal Land": the growth and decline of medieval rural settlements', in M. Aston, D. Austin and C. Dyer (eds.) *The Rural Settlements of Medieval England: Studies Dedicated to Maurice Beresford and John Hurst*, 45-57.

Dyer, C. 2003, *Making a Living in the Middle Ages: The People of Britain 850-1520,* Penguin, London.

Dyer, C. 2004, 'Review of *Shaping Medieval Landscapes: Settlement, Society, Environment* by Tom Williamson', in *Landscape History* 26: 131-2.

Dyer, C. 2018, 'Open fields in their social and economic context: the West Midlands of England', in C. Dyer, E. Thoen and T. Williamson (eds), 29-47.

Dyer, C., Thoen, E, and Williamson, T. (eds) *Peasants and their Fields: The Rationale of Open Field Agriculture, c.700-1800*, Brepols, Turnhout.

Dymond, R. 1876, *Widecombe in the Moor*, Torquay Directory Company, Torquay.

Ekwall, E. 1960, *The Concise Oxford Dictionary of English Place-names*, Oxford University Press, Oxford.

Ellis, P. 1992, *Mendip Hills: An Archaeological Survey of the Area of Outstanding Natural Beauty* (online at http://www.somerset.gov.uk/heritage).

Evans, E.E. 1957, *Irish Folk Ways*, Routledge and Kegan Paul, London.

Everitt, A. 1977, 'River and wold: reflections on the historical origins of regions and *pays'*, *Journal of Historical Geography* 3, 1-19.

Everitt, A. 1979, 'Country, county and town: patterns of regional evolution in England', *Transactions of the Royal Historical Society* (5th Series), 29, 79-108.

Everson, P. and Williamson, T. (eds.) 1998, *The Archaeology of Landscape*, Manchester University Press, Manchester.

Eyre, S.R. 1955, 'The curving plough-strip and its historical implications', *Agricultural History Review* 3, 80-94.

Faith, R. 1997, *The English Peasantry and the Growth of Lordship,* Leicester University Press, Leicester.

Faith, R. 2006 'Worthys and enclosures', *Medieval Settlement Research Group Annual Report* 21, 9-14.

Finberg, H.P.R. 1949,'The open field in Devonshire', *Antiquity* 23, 180-187.

Finberg, H. P. R. 1951, 1969a *Tavistock Abbey: A study in the Social and Economic History of Devon*, Cambridge University Press, Cambridge.

Finberg, H.P.R. 1952, 'The open field in Devon', in W. G. Hoskins and H. P. R. Finberg (eds.) *Devonshire Studies*, 265-88, Jonathan Cape, London.

Finberg, H. P. R. 1954, *The Early Charters of Devon and Cornwall*, Leicester University Press, Leicester.

Finberg, H. P. R. 1964, *The Early Charters of Wessex*, Leicester University Press, Leicester.

Finberg, H.P.R. 1969, 'The open field in Devon' in H. Finberg, *West Country Historical Studies*, 129-151, David and Charles, Newton Abbot.

Finberg, H.P.R. 1976, *The Formation of England 550-1042*, Paladin, St Albans.

Finn, R. W. 1967, 'Devonshire', in H.C. Darby and R. Finn (eds.) *The Domesday Geography of South West England*, 223-95, Cambridge University Press, Cambridge.

Flatrès P. 1957, *Geographie Rurale du Quatre Contrees Celtiques: Irlande, Galles, Cornwall et Man*, Rennes.

Fleming, A. 1994, 'The Reaves revisited', *Proceedings of the Devon Archaeological Society*, 52: 63-74.

Fleming, A. 1998, 'Prehistoric landscapes and the quest for territorial pattern', in P. Everson and T. Williamson (eds.)1998, 42-66.

Fleming, A. 2007, 'Don't bin your boots', *Landscapes*, 8 (1): 85-89.

Fleming, A. and Ralph, N. 1982, 'Medieval settlement and land use on Holne Moor, Dartmoor: the landscape evidence', *Medieval Archaeology* 26, 101-37.

Foard, G. 1978, 'Systematic fieldwalking and the investigation of Saxon settlement in Northamptonshire', *World Archaeology* 9, 357-374.

Foard, G. 2001, 'Systematic fieldwalking and the investigation of Saxon settlement in Northamptonshire', *World Archaeology,* 9:357-74.

Foard, G., Hall, D. and Partida, T. 2005, 'Rockingham Forest, Northamptonshire: the evolution of a landscape', *Landscapes*, 6 (2): 1-29.

Fowler, P. J. 1972, *Archaeology and the Landscape*, John Baker, London.

Fowler, P. J. 1975, *Recent Work in Rural Archaeology*, Adams and Dart, Bath.

Fowler, P.J. and Thomas, A.C. 1962, 'Arable fields of the pre-Norman period at Gwithian, Cornwall', *Cornish Archaeology* 1, 61-84.

Fox, A. 1958, 'A monastic homestead on Dean Moor, South Devon', *Medieval Archaeology* 2, 141-52.

Fox, C. 1932, *The Personality of Britain*, National Museum of Wales, Cardiff.

Fox, H.S.A. 1971, 'A Geographical Study of the Field Systems of Devon and Cornwall', unpublished PhD Thesis, University of Cambridge.

Fox, H.S.A. 1972, 'Field systems of east and south Devon Part 1: east Devon' *Transactions of the Devonshire Association 104*.

Fox, H.S.A. 1973, 'Outfield cultivation in Devon and Cornwall: a reinterpretation'; in M. Havinden (ed) *Husbandry and Marketing in the South-West 1500-1800*, 190-38, Exeter Papers in Economic History No.8, 19-38, Exeter.

Fox, H.S.A. 1975, 'The chronology of enclosure and economic development in medieval Devon', *Economic History Review* 28, 181-202.

Fox, H. S. A. 1981, 'Approaches to the adoption of the Midland System', in Rowley (ed.) 1981, 64-111.

Fox, H. S. A. 1984, 'Some ecological dimensions of English medieval field systems', in K. Biddick (ed.) *Archaeological Approaches to Medieval Europe*, Kalamazoo, 129-158.

Fox, H.S.A. 1989a, 'Peasant farmers, patterns of settlement and pays: transformations in the landscapes of Devon and Cornwall', in R.H. Higham (ed.), *Landscape and Townscape in the South West*, 41-74,University of Exeter Press, Exeter.

Fox, H. S. A. 1989b, 'The people of the wolds in English settlement history' in M. Aston, D. Austin, and C. Dyer (eds.) *The Rural Settlements of Medieval England: Studies Presented to Maurice Beresford and John Hurst,* 77-104, Blackwell, Oxford.

Fox, H.S.A. 1991a, 'Occupation of the Land: Devon and Cornwall', in Miller (ed.), *The Agrarian History of England and Wales*, Vol III, 1348-1500, 152-74, Cambridge University Press, Cambridge.

Fox, H.S.A. 1991b, 'Farming practice and techniques: Devon and Cornwall' in E. Miller (ed.), *The Agrarian History of England and Wales, Vol III, 1348-1500*, 303-23, Cambridge University Press, Cambridge.

Fox, H.S.A. 1994, 'Medieval Dartmoor as seen through its account rolls', *Devon Archaeological Society Proceedings* 52, 141-179.

Fox, H.S.A., 2001, *The Evolution of the Fishing Village: Landscape and Society along the South Devon Coast,* 1086-1550, Leopard Head's Press, Oxford.

Fox, H.S.A. 2005, 'Fragmented manors and the customs of the Anglo-Saxons' in S. Keynes and A. Smith, *Anglo-Saxons: Studies Presented to Cyril Roy Hart*, 78-97, Four Courts Press, Dublin.

Fox, H.S.A. and Padel, O.J. 2000, *The Cornish Lands of the Arundells of Lanherne, Fourteenth to Sixteenth Centuries*, Devon and Cornwall Record Society, New Series, Volume 41.

Franklin, L. 2006, 'Imagined landscapes: archaeology, perception and folklore in the study of medieval Devon', in S. Turner (ed.) 2006, 144-61.

Fyfe, R. M., Brown A. G. and Coles, B. J. 2003, 'Mesolithic to Bronze Age vegetation change and human activity in the Exe valley, Devon, UK', *Proceedings of the Prehistoric Society* 69, 161-81.

Fyfe, R.M., Brown A.G. and Rippon, S.J. 2003, 'Mid- to late-Holocene vegetation history of Greater Exmoor, UK: estimating the spatial extent of human-induced vegetation change', *Vegetation History and Archaeobotany* 12, 215-32.

Fyfe, R.M. and Rippon, S.J. 2004, 'A landscape in transition? Palaeoenvironmental evidence for the end of the 'Romano-British' period in South West England', in *Debating Late Antiquity in Britain AD 300-700*, eds. R. Collins and J. Gerrard, BAR British Series 365, 33-42.

Gaffney, V. and Tingle, M. 1989, *The Maddle Farm Project: An Integrated Survey of Prehistoric and Roman Landscapes on the Berkshire Downs*. British Archaeological Reports British Series 200, Oxford.

Gardiner, M. 2007, 'The origins and persistence of manor houses in England', in Gardiner and Rippon (eds) 2007, 170-182.

Gardiner, M. and Rippon, S. 2007 (eds.), *Medieval Landscapes: Landscape History after Hoskins*, Windgather Press, Macclesfield.

Gelling, M. 1978, *Signposts to the Past*, Dent, London.

Gelling, M. 1984, *Place-Names in the Landscape*, Dent, London.

Gerrard, S. 1997, *Dartmoor*, London: English Heritage/Batsford.

Gerrard, S. 2000, *The Early British Tin Industry*, Tempus, Stroud.

Gerrard, C. with Aston, M. 2007, *The Shapwick Project*: *A Rural Landscape Explored*, The Society for Medieval Archaeology Monograph 25, Maney Publishing, Leeds.

Gillard, B. 2004, *Cornwall Industrial Settlement Initiative, Pensilva*, English Heritage Report R093

Glassie, H. 1982, *Passing the Time: Folklore and History of an Ulster Community*, O'Brien, Dublin.

Gonner, E. C. K. 1912, *Common Land and Enclosure*, Macmillan, London.

Gover, J.E.B. 1948, *The Place-Names of Cornwall*, unpublished TS held at the Royal Institution of Cornwall, Truro.

Gover, J. E. B., Mawer, A. and Stenton, F. M. 1931, *The Place Names of Devon Part 1. English Place-Names Society VIII.* Cambridge: Cambridge University Press.

Gray, H. L. 1915, *English Field Systems*, Harvard University Press, Cambridge, Massachusetts.

Griffith, F.M. 1984,' Archaeological investigations at Colliford Reservoir, Bodmin Moor, 1977-78', *Cornish Archaeology* 23, 49-139.

Griffith, F.M. 1988, *Devon's Past: An Aerial View*, Devon Books, Exeter.

Grundy, G. B. 1919, 'The Saxon Land Charters of Wiltshire', Archaeological Journal, 2nd Series, XXVI, 143-301.

Grundy, G. B. 1920, 'The Saxon Land Charters of Wiltshire', Archaeological Journal, 2nd Series, XXVII, 8-126.

Guthrie, A. 1959-6, 'Hellesvean Dark Age House', *Proceedings of the West Cornwall Field Club,* 1.2, 73-5

Hall, D. 1981, 'The origins of open field agriculture: the archaeological fieldwork evidence', in T. Rowley (ed.) 1981, 22-38.

Hall, D. 1982, *Medieval Fields*, Shire Archaeology, Aylesbury.

Hall, D. 1996, *The Fenland Project, Number 10: Cambridgeshire Survey, Isle of Ely and Wisbech,* East Anglian Archaeology 79, Cambridge.

Hallam, H.E. 1988, *The Agrarian History of England and Wales, Volume 2, 1042-1350*, Cambridge University Press, Cambridge.

Halliday, F. E, 1953, *Richard Carew of Antony: The Survey of Cornwall*, Andrew Melrose, London.

Hamerow, H. 1991, 'Settlement mobility and the 'Middle Saxon shift': rural settlement and settlement patterns in Anglo-Saxon England', *Anglo-Saxon England*, 20, 1-17.

Hase, P.H. 1994, 'The church in the Wessex heartlands', in M. Aston and C. Lewis (eds.), *The Medieval Landscape of Wessex*, Oxbow Books, Oxford.

Harvey, P. D. A. 1989, 'Initiative and authority in settlement change', in M. Aston, D. Austin, and C. Dyer (eds.), *The Rural Settlements of Medieval England*., 31-43, Blackwells, Oxford.

Hatcher, J. 1970a, *Rural Economy and Society in the Duchy of Cornwall 1300-1500*, Cambridge University Press, Cambridge.

Hatcher, J. 1970b, 'Non-manorialism in medieval Cornwall', *The Agricultural History Review*, Vol. 18, No.1, 1-16.

Hatcher, J. 1988, 'New settlement: south west England,' in H.E. Hallam (ed.) *The Agrarian History of England and Wales*, vol.2, 1042-1350, 234-44, Cambridge University Press, Cambridge.

Hayes, P. and Lane, T. 1992, *The Fenland Survey, Number 6: Lincolnshire Survey, the South West Fens.* East Anglian Archaeology 55, Sleaford.

Henderson, C. 1935, *Essays in Cornish History*, Clarendon, Oxford.

Henderson, C. G. and Weddell, P. J. 1994, 'Medieval settlement on Dartmoor and in West Devon: the evidence from excavations', *Devon Archaeological Society Proceedings* 52: 119-40.

Herring, P. 1986*, An Exercise in Landscape History: Pre-Norman and Medieval Brown Willy and Bodmin Moor,* unpublished MPhil thesis, University of Sheffield.

Herring, P. 1996, Transhumance in medieval Cornwall, in H.S.A. Fox (ed.), Seasonal Settlement, Vaughan Paper 39, University of Leicester, 35-44.

Herring, P. 1997, *An Archaeological and Historical Asessment of Godolphin, Breage*, Cornwall County Council, Truro.

Herring, P. 1998 *Cornwall's Historic Landscape: Presenting a Method of Historic Landscape Character Assessment*, Cornwall Archaeological Unit, Truro.

Herring, P. 1999, 'Farming and transhumance in Cornwall at the turn of the first millennium AD, *Journal of the Cornwall Association of Local Historians* 37, 19-25, and 38, 3-8.

Herring, P. 2003, 'Cornish medieval deer parks', in R. Wilson-North (ed.),The Lie of the Land: Aspects of the Archaeology and History of the Designed Landscape in the South West of England, 34-50, The Mint Press, Exeter.

Herring, P. 2004, 'Cornish uplands: medieval, post-medieval and modern extents', in I. Whyte and A. Winchester (eds.), *Society, Landscape and Environment in Upland Britain*, Society for Landscape Studies, Supplementary Series 2, 37-50, Birmingham.

Herring, P. 2006a, 'Cornish strip fields', in S. Turner (ed.) *Medieval Devon and Cornwall: Shaping and Ancient Landscape*, 2006, 44-77, Windgather Press, Macclesfield.

Herring, P. 2006b, 'Medieval fields at Brown Willy, Bodmin Moor, in S. Turner (ed.) Medieval Devon and Cornwall: Shaping and Ancient Landscape, 2006, 78-103, Windgather Press, Macclesfield.

Herring, P. 2011, 'Early medieval transhumance in Cornwall, Great Britain, in J. Klapste (ed.), *Medieval Rural Settlement in Marginal Landscapes, Ruralia VII*, Turnhout, Belgium, Brepols, 47-56.

Herring, P. and Berry, E. 1997, 'Stonaford', *Cornish Archaeology*, 36, 151-75.

Herring, P. and Hooke, D. 1993, 'Interrogating Anglo-Saxons in St Dennis, *Cornish Archaeology*, 32, 67-75.

Herring, P., Kirkham, G., Cahill, N., Thomas, N., Berry, E., Preston-Jones, A., Langdon, A., Sharpe, A. and Thorpe, C. 2011, 'Later Medieval Cornwall', *Cornish Archaeology* 50, 287-286-314.

Herring, P. and Thomas, N. 1988, *The Archaeology of Kit Hill*, Cornwall County Council, Truro.

Herring, P., Preston-Jones, A., Thorpe, C. and Wood, I. 2011, 'Early Medieval Cornwall', *Cornish Archaeology* 50, 263-286

Herring, P. and Thomas, N. 1993, *Stratton Hundred Rapid Identification Survey*, Cornwall Archaeological Unit, Truro.

Herring, P. and Thomas, N. 2000, *Codda, Altarnun, Cornwall, Historic Building and Farmstead Survey*, Cornwall Archaeological Unit, Truro.

Hey, G. 2004, *Yarnton: Saxon and Medieval Settlement and Landscape: Results of Excavations 1990-96*, Oxford Archaeology Thames Valley Landscapes Monograph 20, Oxford.

Higham, R. 2008, *Making Anglo-Saxon Devon*, The Mint Press, Exeter.

Holden, P., Herring, P. and Padel, O. 2010, The Lanhydrock Atlas: A Complete Reproduction of the 17th Century Cornish Estate Maps, Cornwall Editions Ltd, Fowey

Holland, P. 1610, *Britain, or, a Chorographicall Description of the most Flourishing Kingdomes, England, Scotland and Ireland* (Translation of Camden's Britannia)

Homans, G. C. 1941, *English Villagers of the Thirteenth Century*, Harvard University Press, Cambridge Massachusetts.

Homans, G. C. 1969, 'The explanation of English regional difference', *Past and Present*, 42, 18-34

Hooke, D. 1981, 'Open field agriculture: the evidence from the pre-Conquest charters of the West Midlands', in Rowley (1981, 39-63).

Hooke, D. (ed) 1985, *Medieval Villages: a Review of Current Work*, Oxford University Committee for Archaeology Monograph 5, Oxford.

Hooke, D. 1994, *The Pre-Conquest Charter-Bounds of Devon and Cornwall*, Boydell, Woodbridge.

Hooke, D. 1998, *The Landscape of Anglo-Saxon England*, Leicester University Press, Leicester.

Hooke, D. 2008, 'Early medieval woodland and the place-name term *leah*, in O. J. Padel and D. Parsons (eds.) *A Commodity of Good Names: Essays in Honour of Margaret Gelling*, 365-766, Shaun Tyas, Donnington.

Hoskins, W. G. 1952, 'The making of the agrarian landscape, in W. G. Hoskins and H.P.R Finberg, Devonshire Studies, Jonathan Cape, London.

Hoskins, W. G. 1954, *Devon*, Collins, London.

Hoskins, W. G. 1955, *The Making of the English Landscape*, Hodder and Stoughton, London.

Hull, P.L. (ed.) 1987, The Cartulary of Launceston Priory, Devon and Cornwall Record Society 30, Torquay.

Hulland, C. 1978,'Notes on building materials in Devon', in P. Beacham (ed.), *Devon's Traditional Buildings*, Devon County Council, Exeter.

Hurst, J. 1985, 'The Wharram research Project: problem orientation and strategy 1950-1990', in D. Hooke (ed), *Medieval Villages*, 201-204, Oxford University Committee for Archaeology, Oxford.

James, J. 1997*, Medieval Chapels in Devon*, unpublished MPhil thesis, University of Exeter

Jerrold, D. 1949, *An Introduction to the History of England*, Collins, London.

Johnson, M. 2007, *Ideas of Landscape*, Blackwell Publishing, Oxford.

Johnson, N. 1980, 'Later Bronze Age settlement in The South-West', in J. Barrett and R. Bradley (eds), *The British Later Bronze Age*, British Archaeological Report 83(i), Oxford.

Johnson, N. and Rose, P. 1982,'Defended settlement in Cornwall: an illustrated discussion', in D. Miles (ed.) *The Romano-British Countryside, Studies in Rural Settlement and Economy*, British Archaeological Report 103(i), Oxford.

Johnson, N.D. and Rose, P.G. 1994, *Bodmin Moor: An Archaeological Survey. Volume I: The Human Landscape to c.1800,* Royal Commission on the Historical Monuments of England and English Heritage, London.

Jones, G.R.J. 1972, 'Post-Roman Wales' in H.P.R. Finberg (ed) *The Agrarian History of England and Wales Vol.1, Part 2*, 283-382, Cambridge University Press, Cambridge.

Jones, G.R.J, 1976, 'Multiple Estates and early settlement', in P.H.Sawyer (ed.), *Medieval Settlement: Continuity and Change*, 15-40, Edward Arnold, London.

Jones, G.R.J. 1979, 'Multiple estates and early settlement', in P. H. Sawyer (ed.), *English Medieval Settlement, 9-34,* Edward Arnold, London.

Jones, G.R.J. 1981, 'Early customary tenures in Wales and open-field agriculture', in T. Rowley (ed.) The Origins of Open Field Agriculture, 202-25, Croom Helm, London.

Jones, G.R.J. 1985, 'Multiple estates perceived', *Journal of Historical Geography*. 11(4): 339-51.

Jones, R. 2011, 'The village and the butterfly: nucleation out of chaos and complexity', *Landscapes* 11, 25-46.

Jones, R. and Page, M. 2004, 'Characterising rural settlement and landscape: Whittlewood Forest in the Middle Ages', *Medieval Archaeology.* 47: 55-83.

Jones, R. and Page, M. 2006, *Medieval Villages in an English Landscape*, Windgather Press, Macclesfield.

Jope, E.M. 1961, 'Cornish houses, 1400-1700', in E.M. Jope (ed.), *Studies in Building History: Essays in Recognition of the Work of B.H. St.J. O'Neil*, Odhams Press, London.

Jope, E.M. and Threlfall, R.I. 1958, 'Excavation of a Medieval Settlement at Beere, North Tawton, Devon', *Medieval Archaeology* 2, 112-40.

Jordan, W.C. 1996, *The Great Famine: Northern Europe in the Early Fourteenth Century*, Princeton.

Kain, R.J.P. 1979, 'Compiling an Atlas of Agriculture in England and Wales from the Tithe Survey', *The Geographical Journal* 145(2), 225-35.

Kain, R.J.P. (ed.) 2006, *England's Landscape – The South West*, English Heritage, London.

Kain, R.J.P. and Oliver, R.R. 1995, *The Tithe Maps of England and Wales: A Cartographic Analysis and County-by-County Catalogue*, Cambridge University Press, Cambridge.

Kain, R.J.P. and Oliver, R.R. 2001, *Historic Parishes of England and Wales, History Data Service, Colchester.*

Kain, R.J.P. and Ravenhill, W.D. (eds.) 1999, *Historical Atlas of South-West England,* University of Exeter Press, Exeter.

Kirkham, G. 2005, *Cornwall and Scilly Urban Survey: Historic Characterisation for Regeneration,* Cornwall County Council Historic Environment Service, Truro.

Knowles, D. and Hadcock, R.N. 1971, Medieval Religious Houses of England and Wales, Longman, London.

Laithwaite, M. 1978, 'Town Houses up to 1700', in P. M. Beacham (ed) *Devon's Traditional Buildings*, Devon Books, Exeter.

Lambarde, W. 1576, *A Perambulation of Kent: Conteining the Description, Hystorie and Customes of that Shire*, Baldwin, Cradock & Joy, London.

Lambourn, A. 2010, *Patterning within the Historic Landscape and its Possible Causes*, British Archaeological Reports British Series 509.

Lane, T. W. and Hayes, P. 1993, 'Moving boundaries in the fens of south Lincolnshire', in J. Gardiner (ed.), *Flatlands and Wetlands*, East Anglian Archaeology 50, 58-70.

Letters, S. 2003, *Gazetteer of Markets and Fairs in England and Wales to 1516,* List and Index Society, Special Issue 32.

Lewis, C., 2018, 'Test pit excavations within currently occupied rural settlements: results of the English CORS project 2017', *Medieval Settlement Research* 33, 74-87.

Lewis, C., Mitchell-Fox, P. and Dyer, C. 1997, *Village, Hamlet and Field: Changing Medieval Settlements in Central England,* Manchester University Press, Manchester.

Lewis, J. 2004, *Sovereigns, Madams and Double Whites: Fruit and Flower Pioneers in the Tamar Valley*, Devon Books.

lidarfinder.com/, Lidat Map of England and Wales, https://www.lidarfinder.com/.

Linehan, C.D. 1965, 'Deserted sites on Dartmoor', *Report and Transactions of the Devonshire Association* 97, 171-8.

Linehan, C.D. 1966, 'Deserted sites and rabbit warrens on Dartmoor, Devon', *Medieval Archaeology* 10, 113-44.

Linehan, C.D. 1979, 'Historical Background', in Beresford 1979, Medieval Archaeology 23, 107-9.

Loyn, H.R. 1984, *The Governance of Anglo-Saxon England 500-1087*, Edward Arnold, London.

Mackney, D. 1979, *Soil Survey of England and Wales Map of Land Use Capability,* Ordnance Survey for the Soil Survey of England and Wales, Southampton.

Maitland, F.W. 1897, *Domesday Book and Beyond*, Cambridge University Press, Cambridge.

Marshall, W. 1788, *The Rural Economy of Yorkshire,* London.

Marshall, W. 1796, *The Rural Economy of the West of England: including Devonshire and parts of Somersetshire, Dorsetshire and Cornwall together with Minutes in Practice, in Two Volumes*, reprinted in 1970, Augustus M Kelley, New York.

Martin, E.A. 2007, 'Wheare Most Inclosures Be: the Making of the East Anglian Landscape'*,* in M. Gardiner and S. Rippon 2007*, Medieval Landscapes, 122-38.*

Martin, E.A. and Satchell, M. 2008, *Wheare Most Inclosures Be. East Anglian Fields: History, Morphology and Management,* East Anglian Archaeology No.124.

McAvoy, F., Morris, E. L and Smith, G. H. 1980, 'The excavation of a multi-period site at Carngoon Bank, Lizard, Cornwall, 1979', *Cornish Archaeology* 19, 31-62.

Miles, H. and Miles, T. 1973, 'Excavations at Trethurgy, St Austell: Interim Report', *Cornish Archaeology* 12, 25-29.

Ministry of Agriculture, Fisheries and Food, 1979, *Agricultural Land Classification of England and Wales,* Ministry of Agriculture, Fisheries and Food, Pinner.

Minter, E.M. 1965, 'Lanyon in Madron: interim report on the society's 1964 excavation', *Cornish Archaeology* 4, 44-45.

Moon, C.J., 2010 'Geochemical exploration in Cornwall and Devon: a review', *Geochemistry, Exploration, Environment, Analysis,* 10, 331-351.

Morris, C. 1984, *The Illustrated Journeys of Celia Fiennes, c.1682-1712*, MacDonald and Co., London.

Muir, R. 1999 *Approaches to Landscape*, Macmillan, Basingstoke.

Murphy, P. 1996, 'The Anglo-Saxon landscape and rural economy: some results from sites in East Anglia and Essex', in J. Rackham (ed), *Environment and Economy in Anglo-Saxon England,* 23-39, Council for British Archaeology Research Report 89, York.

Natural England 2010 (http://publications.naturalengland.org.uk/publication/144017)

Newman, P. 2011, *The Field Archaeology of Dartmoor*, English Heritage, Swindon.

Nowakowski, J.A., Quinnell, H., Sturgess, J., Thomas, A.C. and Thorpe, C. 2007, 'Return to Gwithian: shifting the sands of time', *Cornish Archaeology 46*, 13-76.

Olson, L. 1989, *Early Monasteries in Cornwall*, Boydell and Brewer, Woodbridge.

Orme, N. 2007, *Cornwall and the Cross: Christianity 500-1560*, Victoria County History, Phillimore, Chichester.

Orwin, C. S. and Orwin, C. S. 1938, *The Open Fields*, The Clarendon Press, Oxford.

Overton, M. 1996, *Agricultural Revolution in England: The Transformation of the Agrarian Economy, 1500-1850*, Cambridge University Press, Cambridge.

Padel, O. J. 1985, *Cornish Place-Name Elements*., English Place-Name Society Vols. LVI/LVII, Nottingham.

Padel, O. 1988, *A Popular Dictionary of Cornish Place-names*, Alison Hodge.

Padel, O. 1999, 'Place-names' in *Historical Atlas of South-West England*, eds. R.Kain and W. Ravenhill, 88-94, University of Exeter Press, Exeter.

Page, M. and Jones, R. 2007, 'Stability and instability in medieval village plans', in Gardiner and Rippon (eds) 2007, 139-152.

Page, W. 1906, *The Victoria History of the County of Devon*, Volume 1, Victoria County History.

Parkes, C. 1987, *The Long-house in Cornwall: The Economic and Social Context*, un-published BA dissertation, University of Exeter.

Parry, S. 2006, *Raunds Area Survey: An Archaeological Study of the Landscape of Raunds, Northamptonshire 1985-94*, Oxbow Books, Oxford.

Pattison, P. 1999, 'Challacombe revisited', in P. Pattison, D. Field, and S. Ainsworth (eds.), *Patterns in the Past: Essays in Landscape Archaeology for Christopher Taylor, 61-70,* Oxbow Books, Oxford.

Payton, P. 1992, *The Making of Modern Cornwall*: *Historical Experience and Persistence of Difference*, Truran, Cornwall.

Payton, P. 2004, *Cornwall: A History*, Cornwall Editions Limited, Fowey.

Pearce, S. 2004, *South-Western Britain in the Early Middle Ages*, Leicester University Press, Leicester.

Pearse Chope, R, 1918, *Early Tours in Devon and Cornwall*, reprinted in 1967, David & Charles, Newton Abbot.

Penna, L. J. 1968, 'Perran Sands', *Cornish Archaeology* 7, 82.

Phythian-Adams, C. 1987, *Rethinking English Local History*, Leicester University Press, Leicester.

Phythian-Adams, C. 1993, 'Introduction: an agenda for English local history', in C. Phythian-Adams (ed.), *Societies, Culture and Kinship 1580-1850*, Leicester University Press, Leicester.

Picken, W.M.M, 1965-7, 'The names of the hundreds of Cornwall', *Devon and Cornwall Notes and Queries*, 30.

Pole, W, 1791, *Collections Towards a Description of the County of Devon,* published from a manuscript of c.1608-1617, J. Nichols, London.

Polwhele, R. 1806, *The History of Devonshire in Three Volumes, Volume I,* reprinted in 1977, Kohle and Coombes, Dorking.

Polwhele, R. 1816, *The History of Cornwall, Civil, Military, Religious, Architectural, Agricultural, Commercial and Miscellaneous, in Seven Volumes, Volume IV,* Cadell and Davies, London.

Postan, M.M. 1966, 'Medieval agrarian society in its prime: England', in M.M. Postan (ed.) *The Cambridge Economic History of Europe, vol.1, The Agrarian Life of the Middle Ages*, 548-632.

Postan, M.M. 1973, 'The Economic Foundations of Medieval Society' in M.M. Postan *Essays on Medieval Agriculture and General Problems of the Medieval Economy*, 3-27, Cambridge University Press, Cambridge.

Pounds, N.J.G. 1944, 'The Lanhydrock Atlas and Cornish agriculture about 1700,' *Report. of the Royal Cornwall Polytechnic Society* 11, 113-25.

Pounds, N.J.G. 1945, 'The Lanhydrock Atlas', *Antiquity* 19, 20-26.

Pounds, N.J.G. 1947, The Historical Geography of Cornwall, unpublished University of London PhD Thesis.

Preston-Jones, A. and Rose, P. 1986, 'Medieval Cornwall', *Cornish Archaeology* 25: 135-85.

Prestwich, M. 2005, *Plantagenet England, 1225-1360*, The New Oxford History of England, Oxford University Press, Oxford.

Quinnel, H. 2004*, Excavations at Trethurgy Round, St Austell: Community and Status in Roman and Post-Roman Cornwall*, Cornwall County Council, Truro.

Quixley, R.C.E. 2018, Antique Maps of Cornwall and the Isles of Scilly, Quixley, Penzance.

Rackham, O. 1980, 'The medieval landscape of Essex', in D. D. Buckley *The Archaeology of Essex to AD 1500*, CBA Research Report 34, 103-7, Council for British Archaeology, London.

Rackham, O. 1986, *The History of the Countryside,* J. M. Dent and Sons, London.

Ravenhill, W.L.D. 1967, 'Cornwall', in H.C. Darby & R. Finn (eds.) *The Domesday Geography of South West England*, 296-347, Cambridge University Press, Cambridge.

Renes, H. 2018, 'Open field landscapes and research in the Netherlands and in Europe', in C. Dyer, E. Thoen and T. Williamson (eds), 121-161.

Riley, H. 2006, *The Historic Landscape of the Quantock Hills* English Heritage, London.

Riley, H. and Wilson-North, R. 2001, *The Field Archaeology of Exmoor*, English Heritage, London.

Rippon, S. 1996, *Gwent Levels: The Evolution of a Wetland Landscape*, Council for British Archaeology Research Report 105, York.

Rippon, S. 2004a, 'Making the most of a bad situation? Glastonbury Abbey, Meare and the medieval exploitation of wetland resources in the Somerset Levels', *Medieval Archaeology* 48, 91-130.

Rippon, S. 2004b, *Landscape, Community and Colonisation: the North Somerset Levels during the 1st to 2nd Millennia AD*, CBA Research Report 152, Council for British Archaeology, York.

Rippon, S. 2006, *Landscape, Community and Colonisation: The North Somerset Levels During the 1st and 2nd Millennia AD*, Council for British Archaeology Research Report 152, York.

Rippon, S. 2007, 'Historic Landscape Characterisation: its role in contemporary British archaeology and landscape history', *Landscapes 8.*2, 1-15.

Rippon, S. 2008, *Beyond the Medieval Village: The Diversification of Landscape Character in Southern Britain*, Oxford University Press, Oxford.

Rippon, S. 2009, 'Understanding the medieval landscape', in R. Gilchrist and A. Reynolds (eds.), 227-54, *Fifty Years of Medieval Archaeology*, Society for Medieval Archaeology, Leeds.

Rippon, S. 2010, 'Landscape change during the "long eighth century" in southern England', in N.J. Higham and M.J. Ryan (eds.), *Landscape Archaeology of Anglo-Saxon England*, 39-64, The Boydell Press, Woodbridge.

Rippon, S. 2012, *Making Sense of an Historic Landscape*, Oxford University Press, Oxford.

Rippon, S. 2018, *Kingdom, Civitas and County: The Evolution of Territorial Identity in the English Landscape*, Oxford University Press, Oxford.

Rippon, S., Claughton, P. and Smart, C. 2009, *Mining in a Medieval Landscape: the Royal Silver Mines of the Tamar Valley*, University of Exeter Press, Exeter.

Risdon, T. 1811, *The Chorographical Description or Survey of the County of Devon*, published in London from an original manuscript of c.1632, for Rees and Curtis, Plymouth.

Roberts, B. 1977, *Rural Settlements in Britain*, Hutchinson, London.

Roberts, B. and Wrathmell, S. 2000 *An Atlas of Rural Settlement in England*, English Heritage, London.

Roberts, B. and Wrathmell, S. 2002 *Region and Place*, English Heritage, London.

Rose, P. and Johnson, N. 1983, 'Some cropmark enclosures in Cornwall', *Cornish Archaeology* 22, 99-104.

Rose, P. and Preston-Jones, A. 1995, 'Changes in the Cornish countryside', in D. Hooke and S. Burnell (eds.), Landscape and Settlement in Britain AD 400-1066, Liverpool University Press, Liverpool.

Rouse, E. 2012, *Tamar Valley AONB Service Area Historic Character Area*, consulting report prepared for Tamar Valley AONB.

Rowley, T. 1974, *Landscape Archaeology: An Introduction to Fieldwork Techniques on Post-Roman Landscapes*, David and Charles, Newton Abbot.

Rowse, A. L. 1941, *Tudor Cornwall*, Jonathan Cape, London.

Ryder, L. 2013, *The Historic Landscape of Devon: A Study in Change and Continuity*, Windgather Press, Macclesfield.

St Leger-Gordon, D. 1950, *Devonshire*, Robert Hale, London.

Sandover, R. 2012, *Reconstructing the Medieval Landscape of Devon: Comparing the Results of Cartographic Analysis and the Domesday Survey*, unpublished PhD thesis, University of Exeter.

Saunders, C. 1972, The excavations at Grambla, Wendron, 1972: interim report', Cornish Archaeology 11: 50-2.

Sawyer, P.H. 1983, 'The royal Tun in pre-Conquest England', in P. Wormald (ed.), *Ideal and Reality in Frankish and Anglo-Saxon Society*, 273-99, Blackwell, Oxford.

Seebohm, F. 1890, *The English Village Community*, Longmans, London.

Shennen, S. 1985, *Experiments in the Collection and Analysis of Archaeological Survey Data: The East Hampshire Survey*, Department of Archaeology and Prehistory, University of Sheffield, Sheffield

Shorter, A.H., Ravenhill, W.L.D. and Gregory, K.J. 1969, *South West England*, Thomas Nelson and Sons, London.

Silvester, R. J. 1988, *The Fenland Survey, Number 3: Norfolk Survey, Marshland and Nar Valley,* East Anglian Archaeology 45.

Slater, G. 1907, 'The inclosure of common fields considered geographically', *Geographical Journal* 29 (1), 35-55.

Simpson, S. J., Griffith, F.M. and Holbrook, N. 1989, 'The prehistoric, Roman and early Post-Roman site at Hayes Farm, Clyst Honiton'. *Proceedings of the Devon Archaeological Society* 47, 1-28.

Stanes, R.G.F, 1964, 'A georgical account of Devonshire and Cornwalle', *Report and Transactions of the Devonshire Association for the Advancement of Science, Literature and Art XCVI,* 269-302.

Steedman, K. 1994, 'Riby Crossroads', *Lincolnshire Archaeology and History* 28, 1-20.

Stenton, F.M. 1945, *Anglo-Saxon England*, Oxford University Press, Oxford.

Stewart, G. 2002, *Grazing Management and Plant Community Composition on Bodmin Moor*, unpublished PhD, University of Plymouth.

Talvitie, P. 2018, 'Open field farming in Finland', in C. Dyer, E. Thoen and T. Williamson (eds), 99-119.

Taylor, C. 1967, 'Whiteparish: a study in the development of a forest-edge parish', *Wiltshire Archaeological and Natural History Magazine* 62, 79-102.

Taylor, C. 1974, *Fieldwork in Medieval Archaeology,* Batsford, London.

Taylor, C. 1983, *Village and Farmstead: A History of Rural Settlement in England*, George Dent, London.

Taylor, S.R. 2002, *Tintagel East, Archaeological and Historic Landscape Assessment*, Cornwall County Council, Truro.

Taylor, A., Malim, T. and Evans, C. 1994, 'Field-work in Cambridgeshire: October 1993-September 1994', *Proceedings of the Cambridge Antiquarian Society* 83: 167-76.

The River Restoration Centre http://www.therrc.co.uk/uk_zoom.php?c=8

Thirsk, J. 1964, 'The common fields', *Past and Present* 29, 3-29.

Thirsk, J. 1966, 'The origins of the common fields', *Past and Present* 33, 142-7.

Thirsk, J. 1987, *England's Agricultural Regions and Agrarian History, 1500-1750*, Macmillan Education, Basingstoke.

Thoen, E. 2018, 'Open fields, capital and labour in medieval and early modern Flanders', in C. Dyer, E. Thoen and T. Williamson (eds), 163-182.

Thorn, C. and Thorn, F. 1979, *Domesday Book: 10 Cornwall*, Phillimore, Chichester.

Tingle, M. 1991 *The Vale of the White Horse: The Study of a Changing Landscape in the Clay Lowlands of Southern Britain from Prehistory to the Present*, British Archaeological Reports 218, Oxford.

Thomas, A.C. 1964, Minor sites in the Gwithian area (Iron Age to recent), *Cornish Archaeology 3*, 37-62.

Thomas, A.C. 1969, Excavations at Crane Godrevy, 1969: interim report, *Cornish Archaeology 8*, 84-8.

Thomas, N. 1996, *Mennabroom, St Neot – An Archaeological Investigation*, Cornwall Archaeological Unit, Truro.

Thorndycraft, V. R.,Pirrie, D., and Brown, A. G., 2004, 'Alluvial records of medieval and prehistoric tin mining on Dartmoor, SW England', *Geoarchaeology* 19(3), 219-36.

Thorpe, C. 2001,*Tregays Farm, near Lostwithiel, Cornwall – Archaeological Watching Brief*, Historic Environment Service, Cornwall County Council, Truro.

Turner, M. 1984, *Enclosures in Britain 1750-1830,* MacMillan, London.

Turner, S. 2004, 'Coast and countryside in 'Late Antique' south-west England, AD 400-600', in R. Collins and J. Gerrard (eds.) *Debating Late Antiquity in Britain AD 300-700* , BAR British Series 365, 25-32.

Turner, S. 2005, 'Devon Historic Landscape Characterisation: Phase 1 Report', unpublished report Devon County Council, Exeter.

Turner, S. (ed.), 2006a, *Medieval Devon and Cornwall: Shaping the Ancient Countryside,* Windgather Press, Macclesfield.

Turner, S. 2006b, *Making a Christian Landscape: How Christianity Shaped the Countryside in Eary Medieval Cornwall, Devon and Wessex*, University of Exeter Press, Exeter.

Turner, S. 2007, *Ancient Country: the Historic Character of Rural Devon*, Devon Archaeological Society, Exeter.

Turton, S.D. and Weddell, P.J. 1988, *Roadford Reservoir Project: Documentary History of West Wortha,* EMAFU Report No. 88.05.

Ugawa, K. 1962, 'The economic development of some Devon manors in the thirteenth century', *Transactions of the Devonshire Association* 94, 630-83.

Vancouver, C. 1813, *General View of the Agriculture of the County of Devon, with Observations on the Means of its Improvement,* Sherwood, Neely & Jones, London.

Vinogradoff, P. 1892, *Villeinage in England. Essays in English Medieval History*, Clarendon Press, Oxford.

Vinogradoff, P. 1905, *The Growth of the Manor*, London.

Wainwright, A., Smart, C. and Rippon, S. 2012, *Farms, Fields and Mines: An Historic Landscape Analysis of Calstock Parish*, University of Exeter unpublished report for Tamar Valley AONB.

Webb, B. (2006), 'The environmental setting of human occupation', in R. Kain (ed.) 2006, 15-40.

Webster, C.J. (ed.) 2007, *South West Archaeological Research Framework: Resource Assessment and Research Agenda*, Somerset County Council, Taunton.

Westcote, T. 1845, *A View of Devonshire in MDCXXX: with a Pedigree of Most of Its Gentry.* Publication of manuscript of c.1630, William Roberts, Exeter.

Whitelock, D. 1979, *English Historical Documents*, Routledge, London.

Williamson, T. 1993, *The Origins of Norfolk*, University of Manchester Press, Manchester.

Williamson, T. 2000, 'Understanding enclosure', *Landscapes* 1.1, 56-79.

Williamson, T. 2003, *Shaping Medieval Landscapes: Settlement, Society, Environment,* Windgather Press, Macclesfield.

Williamson, T. 2005, 'The Angles and Saxons geographically considered', *Saxon: Newsletter of the Sutton Hoo Society*, 42:10.

Williamson, T. 2006, *England's Landscape: East Anglia*, Harper Collins/English Heritage, London.

Williamson, T. 2013, *Environment, Society and Landscape in Early Medieval England: Time and Topography*, Anglo-Saxon Studies 19, The Boydell Press, Wodbridge.

Williamson, T. 2018, 'Open fields in England: an overview', in C. Dyer, E. Thoen and T. Williamson (eds), 5-28.

Williamson, T., Liddiard, R. and Partida, T. 2013, *Champion. The Making and Unmaking of the English Midland Landscape*, Liverpool.

Wood, P. D. 1963, 'Open Field Strips, Forrabury Common, near Boscastle', Cornish Archaeology 2, 29-33.

Worgan, G. 1811, *General View of the Agriculture of the County of Cornwall,* Sherwood, Neely & Jones, London.

Yelling, J.A. 1977, *Common Field and Enclosure in England 1450-1850*, Macmillan, London.